REPORT RESUMES

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ECONOMICS EDUCATION IN CALIFORNIA JUNIOR COLLEGES--AN EXPLORATORY STUDY.

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A STUDY OF ECONOMICS INSTRUCTION IN CALIFORNIA PUBLIC AND PRIVATE JUNIOR COLLEGES WAS ACCOMPLISHED THROUGH REVIEW OF CATALOGS, COURSE OUTLINES, AND OTHER MATERIALS SUPPLIED BY THE COLLEGES, AND THROUGH VISITATION AND TEST ADMINISTRATION AT SELECTED COLLEGES. ALTHOUGH 78 OF THE 80 INSTITUTIONS OFFERED A 1-YEAR PRINCIPLES COURSE AND APPROXIMATELY HALF OFFERED AT LEAST ONE OTHER COURSE, FEWER THAN FIVE PERCENT OF THEIR STUDENTS WERE ENROLLED IN SUCH COURSES. SCORES ON THE TEST OF ECONOMIC UNDERSTANDING SHOWED A SIGNIFICANT IMPROVEMENT IN ECONOMIC LITERACY AMONG STUDENTS WHO HAD COMPLETED A 1-YEAR COURSE, WHILE THERE WAS LITTLE GAIN AMONG THOSE WHO HAD NOT BEEN EXPOSED TO ECONOMICS INSTRUCTION. INNOVATION WAS NOT A COMMON CHARACTERISTIC OF THESE PROGRAMS, AND THE CONTROL GROUP-EXPERIMENTAL GROUP DESIGN HAD NOT BEEN EXTENSIVELY USED TO TEST THE EFFECTIVENESS OF VARIOUS METHODS. (NEED FOR IMPROVEMENT IS NOTED IN MATTERS SUCH AS DEFINITION OF OBJECTIVES, DEVELOPMENT OF STRATEGIES TO MAKE ECONOMICS INSTRUCTION EFFECTIVE AND INTERESTING TO MORE STUDENTS, CURRICULUM CONTENT AND ORGANIZATION, TEACHER PREPARATION, AND INSTRUCTIONAL METHODS AND MATERIALS.) (WO)

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ECONOMICS EDUCATION

in

CALIFORNIA JUNIOR COLLEGES

An Exploratory Study

UNIVERSITY OF CALIF.
LOS ANGELES

OCT 3 1967

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Fred A. Thompson
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Thomas B. Merson

June 1967

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California Junior College Association
Office of Research and Development

Modesto Junior College
Modesto, California

FOREWORD

This study attempts to evaluate quantitatively and qualitatively economics education in California junior colleges and to propose ways of increasing the economic literacy of junior college students. Therefore, the study is restricted to inquiry whose bounds are geographical, institutional, and curricular.

The study is conceived as a groundbreaking effort. Much remains to be done. Omissions are lamentable but necessary. It is hoped the study will become a springboard from which continued effort to improve junior college economics instruction will rise.

The study report has been prepared with several audiences in mind. Among these are instructors teaching elementary economics, administrators interested in curriculum revision, and educators across the nation concerned with the continuing growth and change of the junior college experiment. It is expected that the study will not serve all audiences equally well.

Initiated by the California Junior College Association's Committee on Cooperative Projects with Industry Subcommittee on Economics Education, the study was encouraged by the Northern and Southern California Industry Education Councils. The study was financed by a USOE research grant (OEG-4-7-068368-2483). Major responsibility for the study was carried by Fred A. Thompson, Riverside City College, and Wylie A. Walthall, Laney College, who divided their time throughout the spring semester 1966-67 between the study and their teaching. Thomas B. Merson, Director of Research, California Junior College Association, served as project director. Primary responsibility for compiling this report was carried by Mr. Thompson.

The study would not have been possible without the full cooperation of dozens of people. To all the instructors, professors, administrators, and unpaid consultants who contributed to the study, the staff expresses its sincere appreciation.

The staff wishes to express appreciation for the special contributions to the study of a number of persons and groups: To Mr. Ralph Bradshaw and Dr. Wallace Homitz, presidents respectively of Riverside City College and Laney College for release of Mr. Thompson and Mr. Walthall to staff the study; To Dr. George W. Ebey, for writing the project proposals;

to Dr. Henry Tyler for unfaltering guidance and encouragement both when goals were achieved and when they were missed; to the members and especially to Dr. Frederick R. Huber, Chairman of the Project's Steering Advisory Committee who individually and with the support of the agencies they represent helped from the project's conception to its completion; Dr. Julio L. Bortolazzo, President CJCA; Dr. James Calderwood, University of Southern California; Dr. John Carroll, Director of Education, California Labor Federation, AFL--CIO; Dr. Earl Cheit, Executive Vice Chancellor, University of California, Berkeley; Dr. M. L. Frankel, President (Ex officio), Joint Council on Economic Education; Dr. John Given, CJCA Legislative Advocate; Mr. Sheridan Hegland, Palomar College; Mr. Ivy Lee, Jr., Coordinator, Northern California Industry--Education Council; Mr. William McCann, Executive Secretary, Southern California Industry-Education Council; Mr. Al McNay, Coordinator, School-College Relations, Standard Oil Company; Mr. Don Robertson, South-Western Publishing Company; Dr. Henry Tyler, Executive Secretary, CJCA; Dr. Vernon A. Quellette, Coordinator of Economic Education, The California State Colleges; Dr. Norman Watson, Supt., Orange Coast J.C. District; Dr. Carl Winter, Bureau of Jr. College Education, State Department of Education; and Mr. John Wixon, Contra Costa College.

To the administration, department chairmen, and staff of the colleges which contributed time and ideas so generously in the interview visits and to the persons who administered the Tests of Economic Understanding in: Cerritos College, Chabot College, Chaffey College, Compton College, Diablo Valley College, Foothill College, Gavilan College, Glendale College, Golden West College, Laney College, Long Beach City College, Los Angeles Valley College, Merritt College, Mt. San Jacinto College, Riverside City College, City College of San Francisco, San Joaquin Delta College, and College of San Mateo.

To the 25 special consultants who, representing the colleges listed above, in seminar conferences helpfully evaluated the findings and refined the recommendations of the staff but more importantly who expressed unreserved enthusiasm about taking part in the projected studies which this report recommends.

The staff is aware of many unanswered and imperfectly answered questions. It reminds itself that this was intended as an exploratory study. And it hopes means will be found to carry out its recommendations in order that the community colleges of the nation can demonstrate their untapped potential as an effective agent in extending economic literacy.

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Chapter 1

CONSTRUCT OF THE STUDY

Introduction

This study conducted by the California Junior College Association was initiated by its Committee on Cooperative Projects with Industry. It was funded by a small-project grant from the United States Office of Education. The research represents the work of two junior college instructors of economics with cooperative support form California's 80 junior colleges. The study was directed by the CJCA Office of Research with the supporting guidance of the CJCA Economics Education sub-committee. The study was completed during the spring semester 1966-67.

Scope of the Study

The title of the study, Economics Education in California Junior Colleges: An Exploratory Study, is descriptive and prescriptive. The study is exploratory in nature. Economics education is reported as it presently exists in California junior colleges. Recommendations for future improvements flow spontaneously from the findings.

The California Junior College Association reflecting on both the need for economic education in a democratic society, and the unique responsibilities of the junior college to serve lower division students, concluded that California's eighty-plus junior colleges could and should lead the way toward improved economic education. Thus, while the focus of this study is restricted, the procedures, findings, and the ultimate impact of the comprehensive proposal to improve economic education has nationwide, interdisciplinary, and extra-institutional implications.

Although the focus of the study is on junior college economics instruction, an attempt is made to relate economics education in the junior colleges to developments occurring in the high school, and to changes occurring in institutions of higher learing. The junior college does not exist apart from other segments of education. Limitations of time and resources curtailed detailed study and reporting of these important interrelationships.

Purposes of the Study

The goals of this study were threefold:

I. The Status of Economics Education in California Junior Colleges.
This aspect of the study was concerned with what is--what types of courses, objectives, and educational methods currently exist.

II. Recommended Improvements in Economics Education in California Junior Colleges.
This goal serves to recommend how economics education might be improved both in terms of desirable goals and feasible approaches to these goals. To a certain extent this goal concerns what ought to be within the realm of the possible, e.g., new or improved courses of instruction, new course objectives, and educational methods which show promise.

III. A Comprehensive Major Development to Improve Economics Education in the Nation's Junior Colleges.
The foundations for this proposal were constructed under Goals I and II. The proposal presents a plan to develop effective economic education in a junior college environment.

The present publication consummates the first two purposes of the study. The major development proposal will appear as a separate document designed to secure funding for long-range cooperative study and development.

Procedures Followed During the Study

The organizational structure of the study was put into final form in January 1967. Two principal field investigators, one in Southern California and one in Northern California, were selected to conduct the investigative aspects of the study. The tasks before the staff were outlined, modified, and responsibilities allocated. A distinguished Steering/Advisory Committee composed of individuals broadly representative of labor, industry, and education was appointed to review the staff's procedures and the findings generated. The study, once organized, proceeded to center at the investigative staff level, with peripheral contributions from the Steering/Advisory Committee.

The procedure of the investigative staff consisted of eliciting and soliciting information for the study from the California junior colleges, and reviewing published material pertinent to economics education.

As part of the status study, college catalogs from all of the junior colleges in California were collected, and their course offerings in economics analyzed. In addition, course outlines were collected and analyzed relative to content, stated objectives, instructional processes and textbooks utilized.

Enrollment data were collected from each junior college, including total enrollment and enrollment in economics courses.

Additionally, a testing program was conducted at selected junior colleges to assess economic literacy 1) of a cross section of junior college students, and 2) of students who had completed a year's course in economics.

Finally, visitations were made to seventeen junior colleges throughout California in order to confirm data previously collected, and to obtain judgments as to what improvements in economic education might be advantageously undertaken.

Throughout the status study, the research staff worked through the deans of instruction of the several colleges with the knowing grace of the junior college presidents. Cooperation at the administrative and instructional levels was most satisfactory.

Goal II of this exploratory study was aimed toward deriving and securing recommended improvements in economic education in the junior colleges. The junior college visitations were most helpful in this regard. Possible improvements adapted from experimentation in the secondary schools and in higher education were derived primarily from the staff's search of published literature in economics education, and from educators knowledgeable in these areas.

Out of the evidences of previous efforts to improve economics education, the staff sifted out promising approaches to the problems of educating more junior college students more effectively in economics. These recommended improvements were further evaluated and refined at the Northern and Southern California Conferences attended by selected junior college economics instructors, business instructors, social science and business division chairmen, and deans of instruction. The recommended improvements gleaned from all these sources will be reorganized into a proposal to secure funds to test their validity, identify improved and superior practices, and foster their early adoption in many colleges.

This report will be widely distributed to junior colleges in California and across the nation and to other groups studying ways to improve economics education, in order to foster and support the growing effort to extend economic literacy.

PART I. THE STATUS OF ECONOMICS EDUCATION IN CALIFORNIA JUNIOR COLLEGES

Chapter 2

ECONOMICS COURSES OFFERED IN CALIFORNIA JUNIOR COLLEGES 1966-67

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section of the study is to list and interpret an inventory of organized instruction in economics in California junior colleges.

(2) The question answered by this section of the study is, "What courses in economics were offered in California junior colleges, 1966-67?"

(3) Data for this section were obtained from an analysis of 1966-67 college catalogs, verified by subsequent correspondence with each college.

Major Problems Encountered in Compiling the Accompanying Data

Economics is sometimes defined as the study of the principles governing the allocation of scarce means among competing ends. On a less analytical and more descriptive level, economics may be defined as the study of man's activities in satisfying his material wants. Economics, then, runs the gamut from the most abstract theory to a decision as to whether one should rent or purchase a home. The point is: such definitions of economics are helpful, but they provide inadequate criteria for determining if a college course is indeed an economics course.

Should a course be classified as an "economics course" if it has "economics" in its title? Should Home Economics, Economic Geography, the Economics of Real Estate, etc., be classified as economics courses? Because courses such as these have a narrower point-of-view and deal with specific sets of problems where the application of economic analysis is minimal, courses of this nature received only peripheral attention in this study.

In this inventory, attention was focused on four general types of economics courses which are commonly offered in junior colleges in California.

1. A two-semester transfer course, often entitled Principles of Economics, designed for general education, business majors, and economics majors.

2. A one-semester sometimes transferrable course, often entitled General Economics, designed for general education. This course is a "nutshell" version of the Principles course, and is generally less rigorous and analytical.

3. A one-semester transfer course often entitled American Economic History, designed for general education, and for students particularly interested in history and economics.

4. A one-semester non-transfer course occasionally entitled Consumer Economics designed to prepare the non-transfer student for his impending role as a consumer who must make intelligent decisions in the market place.

A course listed in the accompanying compilation as consumer economics had within its content at least four of the following elements:

1. Vocational earnings
2. Money management
3. Household budget
4. Intelligent consumer buying, e.g., credit purchases, food shopping, shelter expenses, clothing expenditures.
5. Income tax
6. Insurance, Social Security
7. Personal investments

Courses entitled Consumer Finance, Personal Finance, Consumer Problems, Personal Investments, Money Management, Consumer Problems of the Family, etc., were considered to be of sufficiently broad scope to be included in this listing. It should be noted that such courses are often offered through the business divisions in the junior colleges.

Business economics courses are listed in this survey if they are entitled Business Economics, and if the point-of-view of the course primarily considers the economy as a whole, rather than goals or problems at the business firm level [19].

The full measure of junior college efforts in economics education is not accurately portrayed by listing only those courses with economics in their title. Many other courses have substantial blocks of material dealing directly with or related to economics. A history course covering the Populist Movement, or the Great Depression cannot avoid the economic implications inherent in history. A political science course covering current budget decisions, power blocs, poverty, national defense, etc., cannot avoid the relevance of economics to national, state, and local governmental affairs. A business course dealing with the theory of the firm or management science must explicitly treat microeconomic principles in an applied way. The peripheral contributions of economics to other subject matter areas are manifold. But in most cases, the treatment of economics *per se* in such courses is not the central concern of the subject matter, textbook, or the instructor. Economics is merely a side dish apart from the entree. Thus, these courses are not listed in this inventory.[1]

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[1] For those who believe that economics might advantageously be included within other contexts or within the framework of existing courses, attention is directed to the visitation summaries and to recommended improvements.

Examples of courses in which perhaps 10-20% of the content deals either directly or indirectly with economics as broadly defined include the following:

1. Introduction to Business
    - pricing
    - supply and demand
    - forms of business enterprise
    - production
    - competition
    - government and business relations
    - labor-management relations
2. Political Science
    - government and the economy
    - public finance
    - fiscal policy
    - war on poverty
    - anti-trust
    - the role of labor
3. American History
    - colonialism
    - the industrial revolution
    - government control of banks & currency
    - the age of railroads
    - economic growth
    - populist movement
    - social control of monopoly and trusts
    - labor unions
    - the Great Depression
    - the impact of war
4. Home Economics
    - the family budget
    - food purchasing
    - furnishing the home
    - wardrobe planning
5. Marriage and the Family
    - money management and budgeting
    - consumer choice
    - food, clothing, and shelter expenditures
    - savings and investments
6. Geography
    - world distribution of resources
    - mineral resources

    demographic patterns
    land use
    regional production

7. Introduction to Social Science
    - economic systems
    - business organizations
    - labor-management relations
    - the consumer and living standards
    - the farm problem
    - the business cycle

8. Farm Management
    - laying hen management
    - price controls
    - marketing

Finally, the question may be properly asked, "Is this inventory a valid measure of the extent of course offerings in economics in California junior colleges?" To this question the honest reply must be that every reasonable attempt has been made to minimize any lack of validity. Catalogs from all of the junior colleges in California were collected and analyzed. In addition, each college was asked to confirm its course offerings in economics for the 1966-67 school year. In this way, courses listed in the catalogs but not offered as a part of the current curriculum at the college were discovered and eliminated. Similarly, courses which were recently introduced and which were not listed in the latest catalog and some courses which had been overlooked in the catalog search were added.

An Inventory of Economics Courses in California Junior Colleges

Economics courses offered in each California junior college are listed in Table 1. Courses are listed by number designation, by course title, and by unit credit. Courses which are offered by the business division are preceeded by "Bus."

TABLE 1. An Inventory of Economics Courses Offered in California Junior Colleges 1966-67

College	Economics Courses
American River College Sacramento, California	1A-1B Elements of Economics (3-3) 2 Economic Statistics (3) 50 Basic Economic Principles (3) 55 Consumer Economics (3)
Antelope Valley College Lancaster, California	1A-1B Principles of Economics (3-3) Bus. 57 Consumer Finance (2)
Bakersfield College Bakersfield, California	1A-1B Principles of Economics (3-3) Bus 54 Personal Finance (3)
Barstow College Barstow, California	1A-1B Principles of Economics (3-3) 51 Consumer Economics (3)
Cabrillo College Aptos, California	1A-1B Principles of Economics (3-3) Bus. 58 Personal Finance (3)
Cerritos College Norwalk, California	1.1-1.2 Principles of Economics (3-3) 3 American Economic System (3) Bus. 34 Personal Finance (3)
Chabot College Hayward, California	1A-1B Principles of Economics (3-3) 10 General Economics (3) Bus. 57 Introduction to Consumer Finance (3)
Chaffey College Alta Loma, California	1A-1B Principles of Economics (3-3) 57 The American Economy (3)
Citrus College Azusa, California	1A-1B Principles of Economics (3-3) 10 Economics (3) Bus. 38 Personal Finance and Investments (3)
Coalinga College Coalinga, California	1A-1B Principles of Economics (3-3) 12 Economics for the Consumer (3)
Cogswell Polytechnical College San Francisco, California	None
Compton College Compton, California	43A-B Principles of Economics (3-3) 200 Economics of Labor and Industry (3)

Contra Costa College San Pablo, California	220-221 Principles of Economics (3-3)
Cuesta College San Luis Obispo, California	1A-1B Principles of Economics (3-3)
Cypress Junior College Cypress, California	1A-1B Principles of Economics (3-3) 3 Survey of Economics (3) 10 Economic History of the United States (3)
Deep Springs College Deep Springs, California	1A-1B General Economics (3-3) Readings in Economic History (2)
College of the Desert Palm Desert, California	1A-1B Principles of Economics (3-3)
Diablo Valley College Pleasant Hill, California	220-221 Principles of Economics (3-3)
East Los Angeles College Los Angeles, California	1-2 Principles of Economics (3-3) 5 Economics for the Citizen (3) 12 Governmental Economics (3)
El Camino College El Camino, California	1A-1B Principles of Economics (3-3) 13 Economic History of the United States (3)
Foothill College Los Altos Hills, California	1A-1B Principles of Economics (3-3) 10 Economic History of Western Civilization (3) Bus. 53 Business Economics
Fresno City College Fresno, California	1A-1B Principles of Economics (3-3) 2 Economic Problems of the San Joaquin Valley (3) Bus. 30 Money Management (3)
Fullerton Junior College Fullerton, California	1A-1B Principles of Economics (3-3) 10 Economic History of the United States (3) Bus. 47 Business Economics (3) Bus. 45 Personal Finance (3)
Gavilan College Gilroy, California	1A-1B Principles of Economics (3-3)

Glendale College Glendale, California	1-2 Principles of Economics (3-3) 11 Economic History of the United States (3) Bus. 45 Consumer Problems (2)
Golden West College Huntington Beach, California	1A-1B Principles of Economics (3-3) 10 American Economic Institutions (3)
Grossmont College El Cajon, California	1A-1B Principles of Economics (3-3) Bus. 87 Personal Finance Management (3)
Allan Hancock College Santa Maria, California	1A-1B Principles of Economics (3-3) Bus. 60 Business Economics (3)
Hartnell College Salinas, California	1A-1B Principles of Economics (3-3) Bus. 59 Business Economics (2)
Humphreys College Stockton, California	None - 1966-67
Imperial Valley College Imperial, California	1A-1B Principles of Economics (3-3) Bus. 36 Personal Finance (3)
Laney College Oakland, California	1A-1B Elements of Economics (3-3) 11 Economic History of the United States (3)
Lassen Junior College Susanville, California	1A-1B Economics (3-3)
Long Beach City College Long Beach, California	1A-1B Principles of Economics (3-3)
Los Angeles City College Los Angeles, California	1-2 Principles of Economics (3-3)
Los Angeles Harbor College Wilmington, California	I-II Principles of Economics (3) (3) 4 Economics for the Consumer (3)
Los Angeles Pierce College Woodland Hills, California	1-2 Principles of Economics (3-3) 12 Government Economics (3)
Los Angeles Trade-Technical College Los Angeles, California	1-2 Principles of Economics (3-3) 5 Economics for the Citizen (3)

Los Angeles Valley College Van Nuys, California	1-2 Principles of Economics (3-3)
College of Marin Kentfield, California	1A-1B Principles of Economics (3-3) 87 Consumer Economics (3)
Menlo College Menlo Park, California	1A-1B Principles of Economics (3-3)
Merced College Merced, California	1A-1B Principles of Economics (3-3) Bus. 43 A-B Economics, Government & Business (3-3) Bus. 52 Personal Finance (3)
Merritt College Oakland, California	1A-1B Elements of Economics (3-3) 11 Economic History of the United States (3) 51 Current Economic Problems (3) 14 Consumer Problems (2) 66 Family Finance (2)
Mira Costa College Oceanside, California	1A-1B Principles of Economics (3-3)
Modesto Junior College Modesto, California	1A Economic Principles (3) 1B Problems of Economics (3) Bus. 30 Consumer Problems (3)
Monterey Peninsula College Monterey, California	1A-1B Principles of Economics (3-3) 51 American Economic System (3) 2 Current Economic Problems (2) Bus. 92 Personal Finance (3)
Mt. San Antonio College Walnut, California	1A-1B Principles of Economics (3-3) 39 Introduction to the American Economy (3) 55 Applied Economics (2) Bus. 74 Personal Finance (3)
Mt. San Jacinto College Gilman Hot Springs, California	1A-1B Principles of Economics (3 -3)
Napa Junior College Napa, California	1A-1B Principles of Economics (3-3) Bus. 60 Personal Finance (3)

Orange Coast College Costa Mesa, California	1A-1B Principles of Economics (3-3) 5 General Economics (3) 16 Consumer Economics (2)
Palomar College San Marcos, California	1A-1B Introduction to Economics (3-3) 61 Consumer Economics (3)
Palo Verde College Blythe, California	1A-1B Principles of Economics (3-3)
Pasadena City College Pasadena, California	1A-1B Principles of Economics (3-3) Bus. 111A-111B Business Economics (3-3)
Porterville College Porterville, California	1A-1B Principles of Economics (3-3) 51 Economics of Consumption (3)
College of the Redwoods Eureka, California	1A-1B Principles of Economics (3-3) Bus. 60 Business Economics (3)
Reedley College Reedley, California	1A-1B Principles of Economics (3-3) Bus. 49 Personal Finance (2)
Rio Hondo Junior College Whittier, California	1A-1B Principles of Economics (3-3) 10 General Economics (3) 13 Economic History of the United States (3)
Riverside City College Riverside, California	1A-1B Principles of Economics (3-3) 3-4 American Economic Institutions and Problems (2-2)
Sacramento City College Sacramento, California	1A-1B Principles of Economics (3-3) 2 Economic Statistics (4) Bus. 52 Consumer Problems (3)
San Bernardino Valley College San Bernardino, California	1A-1B Principles of Economics (3-3) 10 The American Economy (3) 42 A-B Quantitative Analysis in Business & Economics (3-3) Bus. 188 Personal Finance & Law (3)
San Diego Junior Colleges San Diego, California	1A-1B Principles of Economics (3-3)
City College of San Francisco San Francisco, California	1A-1B Economic Principles and Problems (3-3) 10 Economic History of the United States (3) Bus. 132 Personal Finance (2)

San Joaquin Delta College Stockton, California	1A-1B Principles of Economics (3-3) 40 Personal Economics (2)
San Jose City College San Jose, California	10A-10B Principles of Economics (3-3) 92 Consumer Economics (3)
College of San Mateo San Mateo, California	1A-1B Principles of Economics (3-3) 7 Survey of Economic Problems (3) 10 Economic History of Europe (3) 11 Economic History of the United States (3) 14A Labor Economics (3) 14B Collective Bargaining and Public Policy (3) 5 Personal Finances (2)
Santa Ana College Santa Ana, California	1A-1B Principles of Economics (3-3) 2 Fundamentals of Economics (3) Bus. 21 Personal Finance (3)
Santa Barbara City College Santa Barbara, California	1-2 Principles of Economics (3-3) 9 Consumer Economics (3)
Santa Monica City College Santa Monica, California	1A-1B Principles of Economics (3-3) 13 Economic History of the United States (3)
Santa Rosa Junior College Santa Rosa, California	1A-1B Principles of Economics (3-3)
College of the Sequoias Visalia, California	1A-1B Principles of Economics (3-3) 51 The American Economy (3) Bus. 97 Personal Finance (3)
Shasta College Redding, California	1A-1B Principles of Economics (3-3)
Sierra College Rocklin, California	1A-1B Principles of Economics (3-3) Bus. 15 Consumer Problems (3)
College of the Siskiyous Weed, California	1A-1B Principles of Economics (3-3)
Solano College Vallejo, California	49A-49B Economic Development of the United States (2-2) 53A-53B Principles of Economics (3-3) Bus. 43 Personal Finance (3)

Southwestern College Chula Vista, California	1A-1B Principles of Economics (3-3) 10 Survey of Economics (2)
Taft College Taft, California	1A-1B Principles of Economics (3-3)
Ventura College Ventura, California	1A-1B Principles of Economics (3-3) 2 Economic History of the United States (3) Bus. 40 Personal Finance (3)
Victor Valley College Victorville, California	1A-1B Principles of Economics (3-3)
West Valley College Campbell, California	1A-1B Principles of Economics (3-3) Bus. 55 Business Economics (3)
Yuba College Marysville, California	1A-1B Elementary Economics (3-3) 3 Contemporary Economic Practices (3)

SUMMARY

A statistical and graphical summary of Table 1 is given below.

STATISTICAL SUMMARY

Number of California junior colleges in this survey: 80

1. Principles of Economics
   Number offering a two semester sequence transfer course in economics: 78

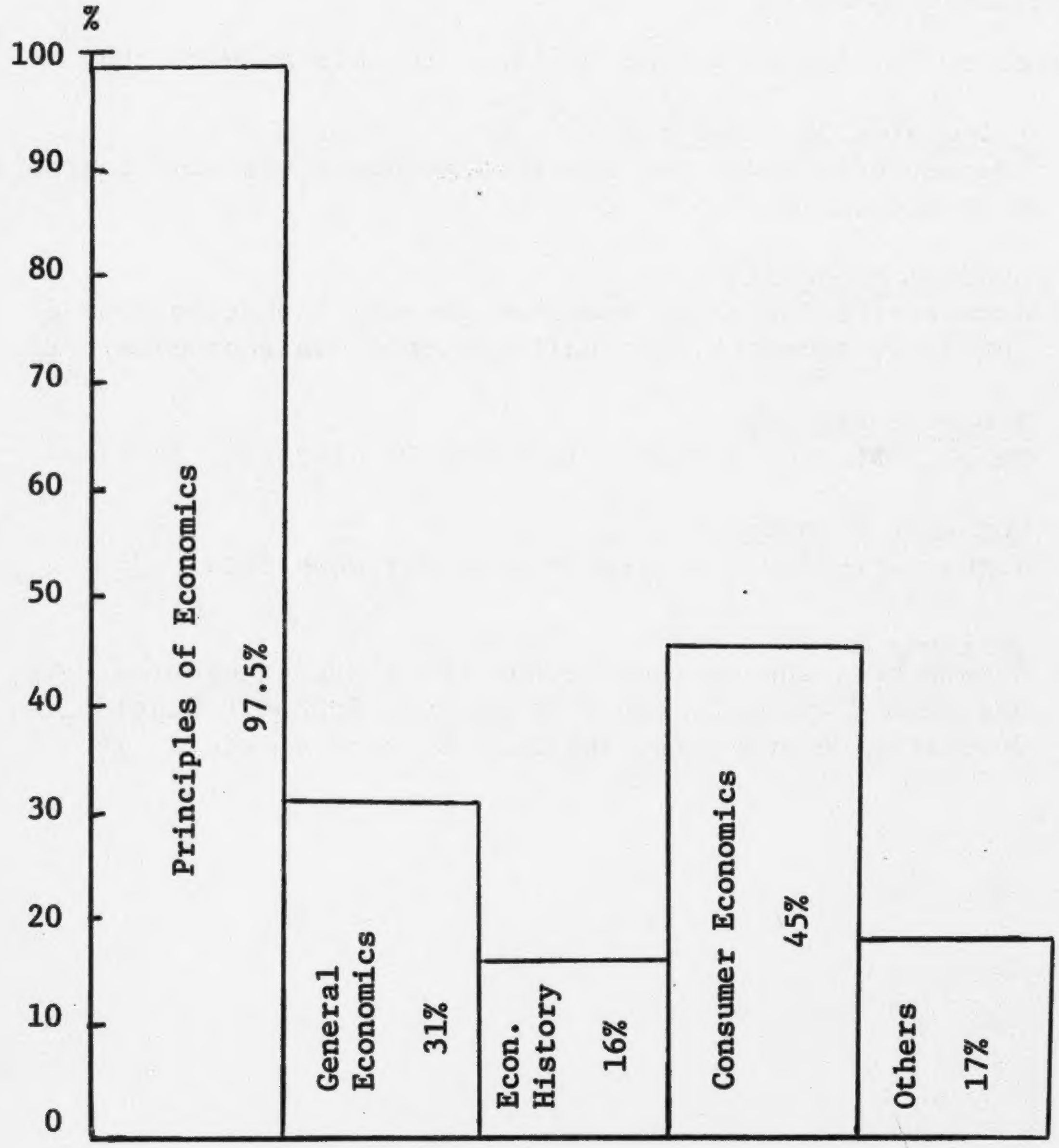
2. General Economics
   Number offering a one semester general education course (or a two semester, two unit sequence) in economics: 25

3. Economic History
   Number offering a course in economic history: 13

4. Consumer Economics
   Number offering a course in consumer economics: 36

5. Residual
   Number offering courses beyond the above categories, e.g., Business Economics, Labor Economics, Economic Statistics, Quantitative Analysis, Regional Economics, etc.: 14

GRAPHICAL SUMMARY[2]



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[2] For category explanations, see pp.6 & 7, "Major Problems Encountered in Compiling the Accompanying Data."

Chapter 3

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-67

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section is to report student enrollment in the four general categories of economics courses offered by California junior colleges.

(2) The major questions answered in this section are (a) what is the total enrollment in the California junior colleges, (b) student enrollment in economics courses, and (c) what proportion of junior college students enroll in economics courses?

(3) The procedure in this section was to solicit from all California junior colleges total enrollment figures and enrollment figures in economics courses for the first week of instruction each semester of the 1966-67 academic year. The percentage of students enrolling in economics courses (by college and in the aggregate) was then derived.

Procedure

In order to secure quantitative data on the current status of economic education in California junior colleges, each school was requested to submit enrollment figures for the fall semester, 1966 and the spring semester, 1967. Data requested from each college were: (1) total enrollment of the college in both day and evening classes, and (2) enrollment in each economics course offered in the college. Enrollment figures for economics courses are those attending during the first week in each course.

These data are compiled in Table 2. A total of 80 colleges are listed with their day, evening and total enrollments for each semester. When enrollment figures were unavailable, total enrollment was estimated using data available from the Bureau of Junior College General Education [9].

Course enrollment is combined under five categories of economics courses:

1. Principles of Economics (1A-1B) is a two-semester university parallel course offered by every public junior college in California.

2. General Economics is a one-semester survey-type course designed for general education students. Included in this category are courses entitled "Business Economics." The latter is a minor departure from the categories reported in Chapter 2 and was effected because many "Business Economics" courses in fact parallel the content usually specified in "General Economics."

3. Economic History of the United States is a one-semester course based on similar offerings at the state colleges and universities.

4. Consumer Economics is a non-transferable one-semester course primarily designed to prepare the non-transfer students to manage their personal finances effectively. (A more complete description of this course may be found in Chapter 2.)

5. Other. This category includes all offerings which do not fall in the preceeding categories and which the college deans of instruction listed as economics courses on the form requesting enrollment data. Included here are such courses as Economic Statistics, Economic Geography, Economic History of Europe, etc.

Since many of these offerings do not fall within our definition of economics courses, by their inclusion in Table 2 total enrollment in economics tends to be somewhat overstated.

The total number of students taking economics at each college was found by adding enrollments in each of the categories of courses. The percentage of students taking economics was computed by dividing enrollment in economics courses by total college enrollment.

Column totals appear at the bottom of the chart. Since some colleges failed to report all the data requested, total enrollment in economics courses is not precisely equal to sum of the five categories of courses.

Table 2. ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON. COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
American River	F'66	5230	3739	8969	222	36	12	-	40	0	310	3.5%
College	S'67	4799	3652	8451	206	59	0	-	40	34	339	4.0%
Antelope Valley	F'66	1442	1252	2694	140	0	-	-	-	20	160	6.0%
College	S'67	1230	1212	2442	0	65	-	-	-	-	65	2.7%
Bakersfield	F'66	4647	2869	7516	213	0	-	-	54	-	267	3.6%
College	S'67	4229	3717	7946	184	151	-	-	110	162	497	6.3%
Barstow	F'66	420	549	969	N/A	N/A	-	-	-	-	61	6.3%
College	S'67	364	502	1166	N/A	N/A	N/A	-	-	-	47	4.0%
Cabrillo	F'66	2116	949	3065	48	0	-	-	51	-	99	3.2%
College	S'67	2035	828	2863	0	32	-	-	41	-	73	2.6%
Cerritos	F'66	N/A	N/A	*10,300	276	53	36	-	-	-	365	3.5%
College	S'67	N/A	N/A	*10,300	150	110	40	-	-	-	300	2.9%
Chabot	F'66	5102	3483	**8585	213	0	181	-	0	-	394	4.6%
College	W'67	4570	3659	**8249	0	98	95	-	29	-	222	2.7%
Chaffey	F'66	3307	3139	6446	169	20	0	-	-	-	189	2.9%
College	S'67	2994	3194	6188	148	72	15	-	-	30	265	4.3%
Citrus	F'66	N/A	N/A	*6200	239	37	-	-	-	-	276	4.5%
College	S'67	N/A	N/A	*6200	172	126	-	-	-	-	298	4.8%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON. COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEN.	DAY	EVENING	TOTAL	1A	1B						
Coalinga College	F'66	641	1099	1740	31	0	-	-	0	0	31	1.8%
	S'67	573	718	1291	0	6	-	-	14	14	34	2.6%
Cogswell Poly-Technical College	F'66	69	0	69	-	-	-	-	-	-	0	0.0%
	S'67	66	0	66	-	-	-	-	-	-	0	0.0%
Compton College	F'66	1573	3634	5207	160	24	-	-	-	24	208	4.0%
	S'67	N/A	N/A	*5200	90	46	-	-	-	27	163	3.1%
Contra Costa College	F'66	3024	2758	5782	180	0	-	-	-	-	180	3.1%
	S'67	2986	2436	5422	0	95	-	-	-	-	95	1.7%
Cuesta College	F'66	1137	1157	2294	151	28	-	-	-	-	179	7.8%
	S'67	1041	1279	2320	84	40	-	-	-	-	124	5.3%
Cypress Jr. College	F'66	1314	585	1899	74	0	0	0	-	-	74	3.9%
	S'67	1260	572	1832	79	52	35	22	-	-	188	10.2%
Deep Springs College	F'66	20	-	20	3	0	-	-	-	-	3	15.0%
	S'67	19	-	19	0	3	-	-	-	-	3	15.8%
College of the Desert	F'66	802	2002	2804	39	0	-	-	-	-	39	1.4%
	S'67	703	2060	2763	0	38	-	-	-	-	38	1.4%
Diablo Valley College	F'66	5339	4794	10,133	371	20	-	-	-	-	391	3.9%
	S'67	4862	4481	9343	198	148	-	-	46	-	392	4.2%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
East Los Angeles	F'66	N/A	N/A	*9800	152	57	50	-	-	52	311	3.2%
College	S'67	N/A	N/A	*9800	156	60	52	-	-	0	268	2.7%
El Camino	F'66	N/A	N/A	*13,700	533	178	-	36	-	-	747	5.4%
College	S'67	N/A	N/A	*13,700	390	269	-	35	22	-	716	5.2%
Foothill	F'66	7122	4872	11,994	327	68	50	0	-	-	445	3.7%
College	S'67	6473	4663	11,136	204	148	50	18	-	-	420	3.8%
Fresno City	F'66	5446	3198	8644	954	278	-	34	239	83	1588	17.4%
College	S'67	4360	3413	7773	141	112	-	30	271	123	677	8.7%
Fullerton Jr.	F'66	8294	3919	12,213	291	45	38	45	44	-	463	3.8%
College	S'67	7531	3754	11,285	225	210	45	45	72	-	597	5.3%
Gavilan	F'66	640	300	940	31	0	-	-	-	-	31	3.3%
College	S'67	540	275	815	15	6	-	-	-	-	21	2.6%
Glendale	F'66	3135	2326	5461	145	26	-	25	0	-	196	3.6%
College	S'67	2862	2070	4932	111	51	-	32	13	-	207	4.2%
Golden West	F'66	2077	3279	5356	180	87	38	-	-	-	305	5.7%
College	S'67	1814	3925	5739	153	35	19	-	-	-	207	3.6%
Grossmont	F'66	3461	1410	4871	269	75	-	-	-	-	344	7.0%
College	S'67	2986	1480	4466	208	106	-	-	-	-	314	7.0%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECO COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
Alan Hancock College	F'66	N/A	N/A	*3000	130	0	0	-	-	-	130	4.3%
	S'67	N/A	N/A	*3000	46	76	25	-	-	-	147	4.9%
Hartnell College	F'66	1890	1200	3090	135	0	35	-	-	-	170	5.5%
	S'67	1701	1337	3038	0	110	0	-	-	-	110	3.6%
Humphreys College	F'66	N/A	N/A	N/A	-	-	-	-	-	-	0	0.0%
	S'67	N/A	N/A	N/A	-	-	-	-	-	-	0	0.0%
Imperial Valley College	F'66	1009	602	1611	79	0	-	-	40	-	119	7.4%
	S'67	854	424	1278	0	53	-	-	35	-	88	6.9%
Laney College	F'66	3200	3200	6400	128	26	-	15	-	-	169	2.6%
	S'67	3000	3400	6400	107	70	-	27	-	-	204	3.2%
Lassen Jr. College	F'66	527	254	781	30	0	-	-	-	-	30	3.8%
	S'67	513	325	838	0	6	-	-	-	-	6	0.7%
Long Beach City College	F'66	11,729	12,085	23,814	413	106	-	-	-	82	601	2.5%
	S'67	N/A	N/A	17,265	353	185	-	-	-	120	658	3.8%
Los Angeles City College	F'66	9944	8201	18,145	682	132	-	-	-	-	814	4.5%
	S'67	10,229	8711	18,940	593	217	-	-	-	-	810	4.3%
Los Angeles Harbor College	F'66	4059	2450	6509	218	95	-	-	0	-	313	4.8%
	S'67	3970	2639	6609	162	150	-	-	16	-	328	5.1%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
Los Angeles	F'66	8237	5270	13,507	596	199	-	-	-	-	795	5.9%
Pierce College	S'67	7552	5397	12,949	144	559	-	-	-	-	703	5.4%
Los Angeles	F'66	3912	8610	12,522	94	80	-	-	32	-	206	1.7%
Trade-Tech.	S'67	4064	9518	13,582	96	45	-	-	35	-	176	1.3%
Los Angeles	F'66	8800	7500	16,300	675	280	-	-	-	-	955	5.9%
Valley College	S'67	8600	7700	16,300	730	240	-	-	-	-	970	5.9%
College of	F'66	3290	2200	5490	284	45	-	-	46	32	407	7.5%
Marin	S'67	2693	2000	4693	155	151	-	-	46	30	382	8.2%
Menlo	F'66	N/A	N/A	N/A	-	-	-	-	-	-	N/A	N/A
College	S'67	N/A	N/A	N/A	-	-	-	-	-	-	N/a	N/A
Merced College	F'66	1325	1236	2561	109	0	-	-	-	19	128	5.0%
	S'67	1239	1336	2575	0	51	-	-	-	11	62	2.4%
Merritt College	F'66	5946	2790	8736	249	111	100	49	86	-	595	6.8%
	S'67	5596	2676	8272	261	123	68	21	92	-	565	6.8%
Mira Costa	F'66	935	644	1579	45	0	-	-	-	-	45	2.9%
College	S'67	867	876	1743	14	0	-	-	-	-	14	0.8%
Modesto Jr.	F'66	N/A	N/A	*7900	194	72	-	-	-	-	266	3.4%
College	S'67	N/A	N/A	*7900	156	31	-	-	-	-	187	2.4%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON. COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
Monterey Peninsula College	F'66	2199	1658	3857	125	16	12	-	-	0	153	4.0%
	S'67	2112	1952	4064	58	54	16	-	-	46	174	4.3%
Mt. San Antonio College	F'66	6270	5833	12,103	310	0	34	-	98	0	442	3.7%
	S'67	5400	5800	11,200	128	103	68	-	99	41	439	3.9%
Mt. San Jacinto College	F'66	462	473	935	50	0	-	-	-	-	50	5.3%
	S'67	496	407	903	0	21	-	-	-	-	21	2.3%
Napa Jr. College	F'66	1753	1210	2963	100	0	-	-	-	-	100	3.4%
	S'67	1387	1273	2660	40	42	-	-	-	-	82	1.6%
Orange Coast College	F'66	6223	9998	16,221	271	40	75	-	38	-	424	2.6%
	S'67	5722	8399	14,121	237	153	79	-	39	-	508	3.7%
Palomar College	F'66	2064	2169	4233	117	44	-	-	49	-	210	5.0%
	S'67	2011	3354	5365	68	73	-	-	39	-	180	3.4%
Palo Verde College	F'66	N/A	N/A	*500	14	0	-	-	-	-	14	2.8%
	S'67	N/A	N/A	*500	0	7	-	-	-	-	7	1.4%
Pasadena City College	F'66	8164	5280	13,444	347	105	141	-	-	24	617	4.6%
	S'67	7378	5277	12,655	332	164	120	-	-	0	616	4.9%
Porterville College	F'66	665	267	932	58	0	-	-	0	0	58	6.2%
	S'67	551	188	739	0	11	-	-	16	34	61	8.3%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON. COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
College of the Redwoods	F'66	2841	3173	6014	75	0	27	-	-	-	102	1.7%
	S'67	N/A	N/A	*6000	104	0	35	-	-	-	139	2.3%
Reedley College	F'66	1252	358	1610	88	0	-	-	32	-	120	7.5%
	S'67	1201	223	1424	0	40	-	-	97	-	137	9.7%
Rio Hondo College	F'66	3376	2896	6272	199	44	107	0	-	-	350	5.6%
	S'67	2945	2519	5464	169	118	86	14	-	-	387	7.1%
Riverside City College	F'66	3590	3518	7108	165	0	68	-	-	-	233	3.3%
	S'67	3240	3219	6459	0	71	42	-	-	-	113	1.8%
Sacramento City College	F'66	N/A	N/A	*7800	279	46	-	-	39	-	364	4.7%
	S'67	N/A	N/A	*7800	300	71	-	-	73	25	469	6.0%
San Bernardino Valley College	F'66	4786	6154	10,940	195	38	123	-	-	29	385	3.5%
	S'67	4185	5976	10,161	132	91	46	-	-	10	279	2.7%
San Diego Jr. College	F'66	8428	6581	15,009	645	249	-	-	-	-	894	5.9%
	S'67	7655	6912	14,567	598	253	-	-	-	-	851	5.9%
City College of San Francisco	F'66	8800	2200	11,000	565	256	-	42	106	67	1,036	9.4%
	S'67	8500	2100	10,600	444	231	-	43	118	53	889	8.4%
San Joaquin Delta College	F'66	4209	2276	6485	240	25	95	-	51	32	443	6.9%
	S'67	3816	2637	6453	223	106	68	-	49	77	523	8.1%
San Jose City College	F'66	4264	5835	10,109	180	37	-	-	45	-	262	2.6%
	S'67	3881	5746	9627	96	98	-	-	91	30	315	3.3%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
College of San Mateo	F'66	8030	11,500	19,530	533	203	36	0	156	110	1,038	5.3%
	S'67	7032	13,005	20,037	360	238	19	20	143	125	905	4.5%
Santa Ana College	F'66	3352	2923	6275	255	35	51	-	-	-	341	5.5%
	S'67	2964	2867	5831	196	121	36	-	-	-	353	6.0%
Santa Barbara City College	F'66	2683	1289	3972	150	40	45	-	-	-	245	6.2%
	S'67	2350	1100	3450	95	80	50	-	-	-	225	6.5%
Santa Monica City College	F'66	6811	5516	12,327	478	138	-	150	-	-	770	6.2%
	S'67	6163	5316	11,479	430	196	-	154	-	-	780	6.8%
Santa Rosa Jr. College	F'66	2800	5500	8300	132	31	-	-	-	-	163	2.0%
	S'67	2500	6000	8500	91	63	-	-	-	-	154	1.8%
College of the Sequoias	F'66	N/A	N/A	*4200	168	14	46	-	-	-	228	5.4%
	S'67	N/A	N/A	*4200	82	85	40	-	-	-	207	5.0%
Shasta College	F'66	2257	2679	4936	137	0	-	-	-	0	137	2.8%
	S'67	2071	3343	5414	0	98	-	-	-	30	128	2.4%
Sierra College	F'66	1640	707	2347	107	0	-	-	38	-	145	6.2%
	S'67	1473	785	2258	49	58	-	-	0	-	107	4.7%
College of the Siskiyous	F'66	600	1200	1800	57	0	-	-	-	16	73	4.1%
	S'67	580	1400	1980	0	27	-	-	-	-	27	1.4%
Solano College	F'66	1752	2151	3903	179	0	12	-	-	-	191	4.9%
	S'67	1615	2452	4067	0	155	16	-	-	-	171	4.2%

ENROLLMENT IN CALIFORNIA JUNIOR COLLEGE ECONOMICS COURSES, 1966-1967

COLLEGE	COLLEGE ENROLLMENT FALL, 1966 & SPRING, 1967				ENROLLMENT IN ECONOMICS COURSES						TOTAL ALL ECON. COURSES	PERCENT OF STUDENTS TAKING ECON. COURSES
					PRINCIPLES		GENERAL	ECON. HIST.	CONSUMER	OTHER		
	SEM.	DAY	EVENING	TOTAL	1A	1B						
Southwestern College	F'66	2616	1409	4025	163	31	41	-	-	-	235	5.8%
	S'67	2314	1742	4056	144	67	46	-	-	-	257	6.4%
Taft College	F'66	537	439	976	37	0	-	-	-	-	37	3.8%
	S'67	483	488	971	0	21	-	-	-	-	21	2.2%
Ventura College	F'66	3750	2000	5750	215	0	-	-	20	-	235	4.1%
	S'67	3300	2400	5700	91	234	-	-	40	-	365	6.4%
Victor Valley College	F'66	468	774	1242	70	0	-	-	-	-	70	5.6%
	S'67	471	818	1289	0	79	-	-	-	-	79	6.1%
West Valley College	F'66	3618	2558	6176	275	29	0	-	-	12	316	5.1%
	S'67	3381	2629	6010	174	177	77	-	-	24	452	7.5%
Yuba College	F'66	2459	1796	4255	142	0	115	-	-	-	257	6.0%
	S'67	2347	2112	4459	0	71	100	-	-	-	171	3.8%
Totals				1,014,717	26,965	11,281	2,956	857	2,990	1539	46,719	4.6%
	Fall '66			517,165	16,593	3,599	1,568	396	1,304	570	24,137	4.7%
	Spring '67			497,552	10,372	7,682	1,388	461	1,686	969	22,582	4.5%

**Chabot--Data for Fall and Winter Quarters

*Estimated. (Based on: Bureau of Junior College General Education, A Guide For California Junior Colleges, California State Department of Education, Sacramento, 1967.)

Summary

Approximately 4.6 per cent of all junior college students enroll in economics courses each semester. The percentage ranges from 0 to 17.4%. Variations from college to college should not be interpreted as a reflection of the effectiveness of economics offerings. There are many variables operating at the various junior colleges which may affect enrollment data favorably or unfavorably. Among these variables are the purposes of the college, the socio-economic background of the students, the majors of students, variations in required courses under academic and vocational-technical programs, etc. Any generalization as to the worth or the effectiveness of any particular college's program in economics must be based upon much more information than is presented in the data contained here.

It is also necessary to qualify the findings with respect to attrition. Students enrolling in economics do not necessarily complete the course. A survey of eight junior colleges indicates that approximately 27 per cent of all students enrolled in economics courses drop out before completion.[3] Since the figures used in the accompanying table are based upon first week enrollment, the percentage of junior college students receiving economics education is overstated. There is no information currently available on statewide attrition rates upon which a confirmed judgment on this question may be based.

The fact remains, however, that in the aggregate California junior college economics offerings attract less than 5 per cent of the junior college students, even when economics is broadly defined. This figure would be even lower if economics courses were not a part of the required programs of business students at most colleges.

Another salient observation emerging from data is that of the students enrolling in economics, 82 per cent elected the transfer Principles of Economics course. In some cases, this is the only option available to students. This is significant because transfer education is but one of the functions of most junior colleges [47, p.58 ff.].[4] Even among those students who do enroll as transfer students, only a minority actually do transfer.

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[3] Data compiled by the Participating Group of Junior College Instructors of Economics, The Center for Economic Education, California State College at Fullerton.

[4] Among the accepted purposes of community junior colleges are occupational education, general education, education for transfer, community service, and student guidance.

Table 3. SUMMARY ENROLLMENT IN ECONOMICS COURSES IN CALIFORNIA JUNIOR COLLEGES 1966-1967

All Economics Courses*	100.0 %
1. Principles of Economics	82.0 %
2. General Economics**	6.3 %
3. Economic History	1.8 %
4. Consumer Economics	6.4 %
5. Other	3.3 %

*Percentages may not add to 100 due to rounding.

**Includes "Business Economics."

Chapter 4

ANALYSIS OF COURSE OUTLINES

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section is to identify (primarily in non-quantitative terms, or in ordinal rankings) major characteristics of the four general types of economics courses offered in California junior colleges.

(2) The major problems were, (a) to describe economics courses in California junior colleges with respect to objectives, content, organization, and textbooks used, and (b) to identify major similarities and differences among similar courses in the several colleges.

(3) Because course outlines provide a more detailed description of course content and organization than do catalog descriptions, and because course outlines are an object of study in accreditation and hence are semi-official statements of curriculum, it was assumed that an analysis of course outlines would reveal accurately course content and organization.

Procedure

To secure economics course outlines, each California junior college was requested to submit copies for this study. A total of forty-eight colleges responded with one or more outlines for their economics courses. Several other colleges stated that institutional policy prohibited distribution of course outlines outside the college.

For the purposes of this study, the analysis followed the four general categories of courses described in Section 1: Principles of Economics, General Economics, Consumer Economics, and Economic History.

Generally, the outlines were characterized by a marked lack of uniformity in format which rendered comparisons difficult. Quantitative analysis of the outlines was limited to a few major factors including major textbooks used in the course, course objectives, and sequential treatment of microeconomics and macroeconomics.[5]

The following evaluations are divided into four parts corresponding to the four major types of economics courses found in California junior colleges. For each course type, the staff compiled a representative course outline. These synthesized outlines were judged to be accurate representations of the courses by economics instructors at junior colleges during visits to 17 colleges. The generalized outlines are included in the descriptions of this Chapter.

I. Principles of Economics

The Principles course is typically a two-semester transfer course paralleling elementary offerings at four-year institutions.

A total of 46 outlines for this course were analyzed. Many economists disagree on whether the student should study macroeconomics or microeconomics first. This disagreement was reflected in the outlines. A total of 29 outlines indicated that macroeconomics is presented in the first semester and microeconomics in the second semester. This order was reversed in 16 of the outlines. In one case, no order of presentation was indicated.

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[5] Briefly, macroeconomics refers to the study of the whole national economy. Microeconomics is concerned with the behavior of specific segments within the economy such as households, business firms, unions, etc.

At least eight major textbooks are used in the Principles of Economics course (See Table 4). Of the eight, McConnell, Bach, and Samuelson are the most widely adopted. These three texts are also frequently used in the four-year colleges. In most cases the major textbook is supplemented by assignments in other books (readings or paperbacks) and periodicals. Approximately half of the outlines indicated that a workbook is also used in the course.

Table 4. Major Textbooks Used in the Principles of Economics Courses

Textbooks*	Number of Courses
McConnell**	16
Bach	9
Samuelson	7
Hailstones and Dodd	3
Reynolds	3
Harriss	1
Fishman et al.	1
Not Indicated or No Major Text	5

* See Appendix A for full title and author citations of these textbooks and those in the following tables.

** Note: In one case, students were given the option of using Bach or McConnell.

The course objectives found in the Principles of Economics outlines ranged in number from none to more than twenty. They are summarized in Table 5. In the vast majority of outlines the course objectives were stated in such broad terms as to be nearly meaningless. As a result, the classification of objectives presented in Table 5 is rather imprecise and there tends to be some overlap in the list.

Table 5. Stated Objectives of Principles of Economics Courses

Course Objectives	Number of Times Reported
Understanding of Economic Institutions and Principles	29
Good Citizenship	22
Awareness of and Interest in Economic Problems	19
Ability to Use Economic Analysis	17
Objective (Critical) Thinking	15
Preparation for Advanced Work in Econ. and/or Business	10
Awareness of Relationship of Econ. to other Disciplines	6
Development of Intelligent Consumers	3
No Stated Objectives	8
Other Objectives*	20

*For example: Development of Unbiased Economic Philosophy, Familarity with Economic Terminology, Emotional Adjustment, Writing and Speaking Clearly, Awareness of Cultural Heritage, etc.

It is significant to note that in a study completed in 1950, the five most commonly stated course objectives derived from questionaires were [46, p.65]:

Basic Principles Foundation
Understanding our Economy
Basis for Advanced Work in Economics
Preparation for Citizenship
Understanding our Institutions

Perhaps there are reasons for the Principles course being called the "traditional" course in economics.

The course outlines failed to reveal substantial evidence of innovation or experimentation in teaching Principles of Economics. The majority of outlines indicated that instruction is based on the lecture-discussion-examination method. However, the traditional teaching approach is often supplemented by the use of cases, guest speakers, audio-visual materials, panels and field trips. In one instance, a programmed text is used with the regular textbook.

There were no major variations in the topics covered in the Principles courses. Course content appears to be largely determined by the textbook used, and the major texts are substantially similar in terms of topical coverage. Exhibit I represents a summary of the major topics found in the typical Principles of Economics course.

EXHIBIT I

Typical Course Outline--Principles of Economics

I. Introduction

- A. Basic Economic Problems
- B. Economic Terminology and Analysis
- C. Historical Overview: The Evolution of Economic Thought
- D. The American Economy: A Descriptive Survey

II. Income-Employment Theory

- A. National Income Accounting
- B. Business Fluctuations: Unemployment and Inflation
- C. Equilibrium Analysis and the Determination of National Income
- D. Fiscal Policy

III. Monetary Theory

- A. Money and Banking
- B. The Federal Reserve and Monetary Policy

IV. Economic Growth and Development

- A. Expenditures and Taxation
- B. Public Debt

V. Price Theory

- A. Prices, Costs and Output Determination
- B. Competition and Monopoly
- C. Government Regulation of Business
- D. Income Determination and the Allocation of Resources

    E. American Agriculture: The Farm Problem
    F. Labor Economics: Unions and Collective Bargaining

VI. International Economics

    A. World Trade, Foreign Exchange and Tariffs
    B. Comparative Economic Systems

II. General Economics

General Economics is a generic designation for a one-semester economics course offered by many junior colleges. This course, which is sometimes taught in the business division, is offered under a variety of names including Basic Economics, Economics for the Citizen, or The American Economy. Many courses entitled Business Economics are of the same mold. Normally the course stresses macroeconomics, and price theory tends to be deemphasized. In one college, General Economics is subdivided into two courses. At most institutions, the course is transferable as an elective to most California state colleges.

Nineteen course outlines were available for analysis. The major textbooks used are shown in Table 6. Most instructors require students to do additional reading in periodicals and selected books.

Table 6. Major Textbooks Used in General Economics Courses

Textbook	Number of Courses
Lynn	4
Gambs and Komosar	3
Keiser (Intro. Economics)	3
Dye, Moore and Holly	2
Trenton	1
Hailstones and Dodd	1
Cauley	1
Goggin	1
None Indicated	2

Table 7 summarizes the course objectives reported in the outlines. Again, the objectives tended to be stated in very broad terms. The number of objectives found in each outline ranged from none to more than ten.

Table 7. Stated Objectives of General Economics Courses

Course Objectives	Number of Times Reported
Knowledge of Economic Institutions and Principles	14
Understanding Economic Problems	10
Objective (Critical) Thinking	5
Intelligent Handling of Personal Finances	4
Ability to Use Economic Analysis	4
Good Citizenship	3
No Stated Objectives	2
Other Objectives*	

*For Example: Vocabulary of Economic and Business Terms, Understanding of Cultural Heritage, Social and Vocational Adjustment, Fulfillment of General Education Requirements, etc.

With one exception, the General Economics course outlines failed to indicate major innovation or experimentation. Most courses rely on the lecture-discussion-examination method occasionally supplemented with field trips, audio-visual materials, cases, etc. However, one college uses taped television lectures (The American Economy series) together with short discussions of the tapes. The major topics normally covered in the General Economics course are presented in Exhibit II.

EXHIBIT II

Typical Course Outline: General Economics

- I. **Introduction**
  - A. **What is Economics?**
  - B. **Basic Economic Problems**
  - C. **The Free-Enterprise System**
  - D. **Economic Institutions**
- II. **Money and Prices**
  - A. **The Role of Money**
  - B. **Inflation**
  - C. **The Banking System**
  - D. **The Federal Reserve**
- III. **National Income and Employment**
  - A. **National Income Accounting**
  - B. **Prosperity and Depression**
  - C. **Government Expenditures and Taxation**
  - D. **Public Debt**
  - E. **Economic Growth**
- IV. **Pricing and Markets**
  - A. **Demand, Supply and Prices**
  - B. **Competition and Monopoly**
  - C. **Government Regulation of Business**
  - D. **The Distribution of Income**
  - E. **Labor and Agriculture**
- V. **The World Economy**
  - A. **Foreign Trade and Tariffs**
  - B **Comparative Economic Systems**

III. Consumer Economics

Consumer Economics is largely concerned with personal money management and the problems of consumer buying. The course is offered under numerous titles including Personal Finance, Economics for the Consumer, Money Management,

Consumer Problems, and Personal Economics. In the traditional sense, it is not really an economics course at all. However, the course does stress practical applications of many economic principles. Most junior colleges offer Consumer Economics as a two or three unit course for non-transfer students. The major texts used in the course are listed in Table 8.

Table 8. Major Textbooks Used in Consumer Economics Courses

Textbooks	Number of Courses
Cohen and Hanson	11
Troelstrup	3
Phillips and Lane	2
Donaldson-Pfabl	1
Fitzsimmons	1
Gordon	1
Unger	1
Hamilton	1
No Text Indicated	2

The course objectives found in the outlines are summarized in Table 9. In several outlines, the objectives were stated in terms of content covered; for example, to learn how to budget, to make investments, to establish a savings account, etc.

Table 9. Stated Objectives of Consumer Economics Courses

Course Objectives	Number of Times Reported
Effective Management of Personal Finances	12
Ability to Solve Consumer Economic Problems	8
Efficient Consumer Purchasing	7
Knowledge of Economic Institutions & Principles	5
Objective (Critical) Thinking	4
Satisfactory Home and Family Life	3
Good Citizenship	2
No Stated Objectives	2
Other Objectives*	4

*For example: Good Oral and Written Expression, Understanding of Cultural Heritage, Good Buymanship, Mathematical Skills, Personal and Social Adjustment, Understanding Theory of Consumer Behavior, etc.

A total of 21 outlines were available for analysis. Two-thirds of the outlines indicated that the course is part of the business curriculum. Six of the courses are offered by the economics department, and one is taught by the home economics department.

Most outlines indicated that major reliance is placed on the lecture-discussion-examination method. However, at least four outlines stated that most of the course is devoted to case studies, guest speakers, panels and field trips rather than lectures. Exhibit III represents the typical organization of topics for Consumer Economics.

EXHIBIT III

Typical Course Outline: Consumer Economics

I. Introduction to Money Management

- A. Money and Marriage
- B. Budgets and Budgeting
- C. Bank Accounts
- D. Taxation and Tax Deductions

II. Savings and Investments

- A. Problems and Methods of Saving
- B. Insurance
  - 1. Life and Property
  - 2. Medical Protection
- C. Retirement Programs
  - 1. Pension Plans
  - 2. Social Security
- D. Investing in Securities
  - 1. Securities Markets
  - 2. Types of Securities
  - 3. Sources of Assistance

III. Consumer Buying

- A. Characteristics of Good Shopping
- B. Advertising and Buying Habits
- C. Shopping for Food and Clothing
- D. Consumer Credit
  - 1. Uses and Abuses of Credit
  - 2. Types and Sources of Credit
  - 3. The Price of Credit
- E. Buying or Renting a Home
- F. Consumer Protection

IV. Estate Planning

IV. Economic History of the United States

Eight outlines for this course were secured from the colleges. This number may be insufficient for a valid analysis; nevertheless, the available data are presented below. It should be noted that several junior colleges offer alternative economic history courses, for example, Economic History of Europe, Foundations of Business Institutions, Development of the Contemporary Economy, etc. Major course objectives are listed in Table 10. The major texts used in the Economic History of the United States courses are shown in Table 11.

Table 10. Stated Objectives of
Economic History of U.S. Courses

Course Objectives	Number of Times Reported
Understanding the U.S. Economic System and its Development	6
Knowledge of Economic Influences, Issues, and Institutions	6
Good Citizenship	2
Objective (Critical) Thinking	2
Use of Economic Analysis	2
No Stated Objectives	2
Other Objectives*	3

*For example: Development of a Perspective in International Economics, Preparation for Advanced Work in Economics and/or Business, etc.

Table 11. Major Textbooks Used in Economic History of U.S. Courses

Textbooks	Number of Courses
Fite and Reese	2
North	1
Patton	1
Faulkner	1
Bolino	1
None Indicated	2

None of the oulines analyzed indicated significant new approaches or experimentation in instruction. Exhibit IV represents a summary of the major topics covered in the typical course, Economic History of the United States.

EXHIBIT IV

Typical Course Outline: Economic History of the United States

Comments: There are two basic approaches used in organizing course outlines for economic history: (1) the chronological approach, and (2) the topical approach. The latter typically includes sections on agriculture, commerce and communication, industry and labor, banking and finance, etc. The outline below follows the chronological approach since it was the most frequently encountered.

I. The Colonial and Formative Period
  A. Economic Origins of Discovery and Colonization
  B. Colonial Agriculture, Industry and Commerce
  C. Economic Causes and Consequences of the Revolution
  D. Agricultural, Commercial and Industrial Development to 1860
II. Reconstruction to World War I
  A. The Development of Transportation and Communications
  B. Industry and Labor
  C. The Rise of "Big Business" and the Role of Government
  D. Financial Developments
  E. Agriculture and the Populist Movement
  F. Economic Aspects of the First World War
III. Economic Development in the Twentieth Century
  A. Industry and Agriculture in the 1920's
  B. The Great Depression
  C. The New Deal
  D. World War II
  E. Economic Developments since 1945

Conclusions

The course outlines proved of limited value in providing information on the current status of economic education in California's junior colleges. The outlines rarely reflected what is actually occurring in the classroom. Many instructors tend to view course outlines as a bothersome administrative requirement rather than an aid to instruction. This view was confirmed during visits to various colleges. Some of the outlines were out-of-date, and not infrequently they had been prepared by instructors who are no longer with the college.

As presently stated, course objectives are usually so vague as to defy accurate evaluation of course effectiveness, i.e., whether stated objectives are actually attained. In some cases these objectives were simply copied from the adopted textbook, while other objectives paralleled the college's goals and purposes as stated in the college catalog.

The educational value of course outlines might be enhanced if they were revised periodically according to a standard format. Improved outlines might be exchanged among colleges on a regular basis, as a means of improving communications and perhaps providing a spur to innovation, experimentation, and improved instruction.

The typical course outlines (Exhibits I--IV) appear to constitute an accurate summary of the topics generally taught in economics courses in California Junior colleges.[6]

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[6] See Chapter 6, Junior College Visitations, "Reactions to Course Outlines."

Chapter 5

ECONOMIC LITERACY IN CALIFORNIA JUNIOR COLLEGES AS MEASURED BY THE TEST OF ECONOMIC UNDERSTANDING

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section of the study is to evaluate the current state of economic literacy among students in California junior colleges.

(2) The questions answered by this section are,"How do junior college students perform when given a standardized text on economics, and how do they compare with other students?"

(3) The test data for this section were obtained by administering the Test of Economic Understanding to samples of students in four broadly representative California junior colleges. Two student groups representing, (a) the cross-sectional student population, and (b) students who were completing a year's study of economics in a transfer course, were tested. The test results were then analyzed and interpreted.

Procedure

In order to assess the current status of economics education in California junior colleges, it was deemed essential to conduct a testing program to measure present economic literacy among the student population. It was immediately conceded that economic literacy is a term subject to many interpretations and that any standardized test instrument would not be entirely satisfactory. It is doubtful that full and complete agreement as to what economic literacy means in terms of specific knowledge, attitudes, and skills will ever be reached among economists. The task remained, however, to measure present standards in the junior colleges even if the yardstick used was imperfect.

Test Selection

In recognition of the need for the measurement of economic literacy, the Joint Council on Economic Education appointed the Committee on Measurement of Economic Understanding and assigned to it the task of preparing two forms of a test for students in secondary schools and colleges. The test was based upon defined goals as set forth by the National Task Force on Economic Education, a group consisting of five of the nation's leading economists and two distinguished secondary school educators [36]. The resulting Test of Economic Understanding is designed to measure basic economic understandings deemed essential for good citizenship [43]. The fifty multiple-choice test questions sample what might be termed layman's economics--the kind of knowledge that capable people may pick up without formal training in economics. For this reason, this test is useful in testing heterogeneous populations.

The Test of Economic Understanding was selected for this study as the best readily accessible standardized instrument currently available. This test also had the advantage of widespread utilization among other student subsets with corresponding published test results for comparison purposes.

Selecting the Student Samples

For purposes of this study, representative samples of two groups of students were desired: (1) a group of students which was representative of a cross section of all California junior college students and (2) a group of students representative of junior college students who were currently completing the year course, Principles of Economics.

The problem of deriving representative samples was complicated by several factors: (1) there exists no statewide profile of junior college student characteristics in California, (2) all colleges do not have complete or comparable student characteristics data, (3) California junior colleges are known to be diverse in their student populations making it desirable, if possible, to obtain a heterogeneous sample, and (4) selection of sampling procedures were further limited by the funds available.

Tests of Economic Understanding were administered in four anonymous, broadly representative California junior colleges in the northern and southern portions of the state.[7] The four colleges (selected out of 80) were chosen as follows: One was a suburban college with a substantial percentage of transfer students. Another was a metropolitan college with a high percentage of culturally disadvantaged students. Two colleges served smaller cities and their surrounding agricultural areas.

One sample of students consisted of students in the four colleges who were currently completing the year-long Principles course in economics--a total of 241 students. These students were judged to be representative of the highest level of economic literacy attained by students in California junior colleges, illustrating the most extensive effort in the junior colleges to educate students in economics. It is recognized that the Test of Economic Understanding is not a valid measure of the intents of the traditional Principles course. It is also obvious that students taking such a course are generally not typical of the junior college student population.[8] Furthermore, the tests were administered in May before the course had been entirely completed.

Characteristics of the sample of students completing the Principles course were not compiled. The typical student in this group is a male sophomore 21 years of age having a SCAT score significantly above the average for the college. These characteristics result from the natural and contrived screening process outlined earlier.

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[7] It is not our purpose to identify specific colleges or instructors with test results.

[8] Many junior colleges require that students have sophomore standings, minimum SCAT scores, or a passing grade in English before they are allowed to enroll in the Principles course. Further screening of this sample is accomplished by requiring that second semester students satisfactorily complete the first semester portion of the course.

The second sample of students sought a cross-sectional representation of all students in California junior colleges. The purpose of this sample was to provide an accurate assessment of the level of economic literacy of junior college students generally. Selecting this sample presented problems which were perhaps only partially overcome.

The first step was to identify in each of the four colleges, classes which had no entrance prerequisites (usually a required course) and which consequently enrolled an approximate cross-section of the total college population. Each college was given freedom to choose the classes to which it would administer the TEU tests. From previous studies each college had identified classes which provided the best representation of its total enrollment. Among the colleges classes in health, physical education, and history were used. Tests were administered to 485 students in these classes in the four colleges.

The second step was to adjust the sample in each college to approximate the college-wide profile of student characteristics; sex, class (freshmen, sophomores, and others) and ability as measured by total SCAT scores. Student tests were discarded as needed until a reasonable match was obtained. Removal of tests was never effected on the basis of TEU scores. Some tests had to be discarded because of incomplete information on sex, class, or ability. It should be noted that an exact matching of the sample with the total college population could never be achieved through this process because total college norms are compiled at the start of each college year, changes due to attrition are not known, and the tests were administered at the end of the year.

Validity of the Representative Sample

Even if it is assumed that the sample of students tested in each college became by these processes a sufficiently accurate representation of all students in each of the four colleges, it is appropriate to ask, "How well do the four colleges represent the 80 junior colleges in California?" That is, how accurately do the 485 students tested in these four colleges represent the half-million students in all 80 colleges?

The paucity of data available on all junior college students in California made a definitive answer to this question impossible. No statewide student profiles are available. A study conducted in 1965 of 51,531 students applying for admission to twenty-two junior colleges in California was judged to be the best source of comparative data [42]. This study indicates that a total converted SCAT score of 294 places the testee in the 48-50 percentile band for all California junior college students tested. The mean total converted SCAT scores for all students entering the four representative colleges were 286, 292, 296, and 296. An unweighted average of these means (292.5) indicates that this sample lies in the 45th percentile of all junior college students in California, although the data must be interpreted with many qualifications. A weighted average of mean SCAT scores from the four junior colleges in our representative sample (total n = 344) yields 293, a figure even closer to the 294 centile range. One would conclude that the representative sample derived from these four colleges is close to being representative (in terms of student abilities) of the California junior colleges. A more extensive or precise appraisal is judged to be unjustified by the data presently available.

Resources available to this study precluded compiling statewide student data or testing a larger sample. A more fundamental question of sampling validity is one that asks to what degree the criteria of sex, class, and ability are related to differences in economic understanding? Data on social and economic stratification might prove to be more meaningful. Economic and social data are not available for the total junior college population in California. To have collected data on such factors in this study would have extended the study beyond reasonable limits.

Data comparing the sample of students tested compared with characteristics of the total student profile of each college are compiled in Table 12.

Table 12. Characteristics of Tested Student Samples in Four Junior Colleges Compared with Total Student Profiles of These Colleges

Characteristics			College Profile	Derived Sample
College 1			-	n=57
	Sex:	male	62%	60%
		female	38%	40%
	Class:	Freshmen	85%	81%
		Sophomores	11%	8%
		Others	4%	5%
	SCAT Score*	Mean	286	285
		S.D.	16	15
College 2			-	n=52
	Sex:	male	58%	56%
		female	42%	44%
	Class:	Freshmen	62%	69%
		Sophomores	37%	29%
		Others	1%	2%
	SCAT Score*	Mean	292	296
		S.D.	15	10
College 3			-	n=182
	Sex:	male	55%	54%
		female	45%	46%
	Class:	Freshmen	67%	61%
		Sophomores	33%	39%
		Others	--	--
	SCAT Score*	Mean	296	297
		S.D.	13	11
College 4			-	n=53
	Sex:	male	59%	62%
		female	41%	38%
	Class:	Freshmen	73%	62%
		Sophomores	26%	38%
		Others	1%	-
	SCAT Score*	Mean	296	299
		S.D.	13	10

*Total Converted Score (Verbal and Quantitative)

A second standard by which the sample colleges could be compared with all California junior colleges was provided by data in the files of the American College Testing Program.[9] These data developed by Richards, Rand, and Rand give estimated factor scores for each junior college listed in the Junior College Directory. The factors are: cultural affluence, technological specialization, size, age, transfer emphasis and business orientation. On a national basis the scores for each college for each factor are listed in stanines with a national mean of 5.0 and standard deviation of 1.8. The combined mean stanine of the four sample colleges was identical to the mean stanine of all California junior colleges in every factor except size where the mean stanine of the sample colleges was 8.0 and the mean stanine of all California junior colleges was 7.3. However, the ACT data on size was based on district-wide enrollment figures and one college of the sample had since established a separate identity from a sister college in its district. Judging from the ACT data, the four sample colleges combined provide almost an exact representation of California junior colleges.

Measurement of Economic Literacy of Junior College Students

Performance on the Test of Economic Understanding of the samples of junior college students in four junior colleges is presented in Table 13.

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[9] Provided in a letter from Donald P. Hoyt, Coordinator, Research Services, ACT.

Table 13. Performance Scores on the Test of Economic Understanding of Student Samples in Four California Junior Colleges

Colleges	Number in Sample	Mean Scaled Test Score*	S.D.
College 1			
Representative Sample	57	15.0	2.9
Second-Semester Economics Students	53	25.1	3.9
College 2			
Representative Sample	52	17.5	4.3
Second-Semester Economics Students	58	26.1	3.4
College 3			
Representative Sample	182	18.4	4.2
Second-Semester Economics Students**			
Pre-Test	225	19.2	3.9
Post-Test	125	27.3	2.8
College 4			
Representative Sample	53	18.0	4.4
Second Semester Economics Students	79	25.4	3.9

* See Table 14 for scaled score-raw score conversion.

** Data for 1965-1966 and 1966-1967 academic years. Pre-test data for students at the start of the first semester of the year course is included from a previous study.

Interpretation of the raw-score-scaled score equivalents may be made from Appendix B.

Analysis of Economic Literacy of Junior College Students

Comparison of performance on the Test of Economic Understanding by the two samples of junior college students is summarized in Table 14.

Table 14. Performance on the Test of Economic Understanding by Two Samples of Junior College Students

	Number in Sample	Unweighted Mean Scaled Score*
Total Representative Sample	344	17.2
Total Second Semester Economics Students Sample	315	25.4

* Calculated by adding the mean scores from each college and dividing by four. This prevents any one college from unduly influencing results.

Comparisons of the performance on the Test of Economic Understanding by the two samples of junior college students along with high school students and four-year students are made in Table 15.

Table 15. Level of Economic Understanding of Junior College Students and Others[a]

	Mean Test Scores Scaled	Standard Deviation
High School seniors[b]		
No econ. courses (n=4601)	16.6	5.0
One econ. course (n=1834)	20.0	4.3
Four-year college		
Sophomores after econ. course[c] (n=167)	26.1	2.7
Junior college students[d]		
Representative sample (n=344)	17.2	3.9
Second semester economics students (n=315)	25.4	3.5

[a] All test scores are on the standardized two forms of the 50 item objective Test of Economic Understanding.

[b] Normative data from Science Research Associates based upon a widely representative sample of high school students.

[c] Data from studies of Carnegie Tech and University of Nebraska students [2 and 32].

[d] Data from Table 14. Included in the representative sample are students who indicated some previous training in an unspecified economics course, either in high school or in college.

Analysis of both samples with respect to a record of previous instruction in economics, and ability as measured by SCAT scores can be made from Tables 16, 17, and 18. Table 16 provides a statistical comparison of 24 sub-groups of the sample of all students (Groups 1-18) and of the sample who were completing a year course in economics (Groups 19-24). Table 17 identifies the Groups of Table 16. Table 18 identifies the SCAT total score range embraced by each SCAT percentile band shown in Table 16.

Table 16. COMPARISON OF THE PERFORMANCE ON THE TEST OF ECONOMIC UNDERSTANDING BY SUB-GROUPS OF TWO SAMPLES OF JUNIOR COLLEGE STUDENTS

GROUP*	TEU-SCAT CORRELATION COEFFICIENT	MEAN TEU	STANDARD DEVIATION	MEAN SCAT	STANDARD DEVIATION	FREQ.	MEAN AGE
		Sample 1: Representative Sample					
1		17.52	4.8713	-	-	485	20.44
2		19.92	4.6913	-	-	70	
3		17.10	4.6522	-	-	391	
4	.6127	17.75	4.7130	296.809	14.4741	425	
5	.5603	19.95	4.3073	296.730	12.4239	63	
6	.6432	17.38	4.6161	296.747	14.6818	345	
7	.1006	20.95	3.7183	310.787	7.9520	146	
8	-.2897	23.47	2.8308	310.705	7.0022	17	
9	.2017	20.60	3.6305	310.626	8.0267	123	
10	.1912	18.29	3.5669	299.475	2.3627	120	
11	.6603	20.54	2.6582	299.454	2.1893	22	
12	.1408	17.76	3.4115	299.423	2.4057	92	
13	.1716	16.15	3.7696	290.027	2.8088	73	
14	.4445	17.35	5.0371	290.214	3.0279	14	
15	.0158	15.96	3.3296	290.087	2.7162	57	
16	.2154	12.94	3.6579	275.116	7.8879	86	
17	-.3463	16.30	2.7586	276.100	5.6824	10	
18	.2376	12.57	3.5727	275.191	8.0165	73	
		Sample 2: Students Completing a Year Economics Course					
19		25.44	3.5770	-	-	241	20.95
20	.2668	26.59	3.0087	305.594	20.5728	106	
21	.3868	27.53	2.7764	314.746	7.1624	63	
22	-.0505	25.70	2.4617	299.888	2.3465	27	
23	-.0093	24.66	3.1972	291.250	2.8025	12	
24	-.7566	23.50	2.5980	-	-	4	

* See Group Explanations in Table 17.

Table 17. Characteristics of Groups Whose Performance is Indicated in Table 16*

GROUP	EXPLANATION
1	ENTIRE REPRESENTATIVE SAMPLE
2	REPRESENTATIVE SAMPLE WITH PREVIOUS ECONOMICS
3	REPRESENTATIVE SAMPLE WITHOUT PREVIOUS ECONOMICS
4	REPRESENTATIVE SAMPLE WITH SCAT ENTIRE GROUP
5	REPRESENTATIVE SAMPLE WITH SCAT WITH PREVIOUS ECONOMICS
6	REPRESENTATIVE SAMPLE WITH SCAT WITHOUT PREVIOUS ECONOMICS
7	REPRESENTATIVE SAMPLE WITH SCAT 75-99 PERCENTILE ENTIRE GROUP
8	REPRESENTATIVE SAMPLE WITH SCAT 75-99 PERCENTILE WITH PREVIOUS ECONOMICS
9	REPRESENTATIVE SAMPLE WITH SCAT 75-99 PERCENTILE WITHOUT PREVIOUS ECONOMICS
10	REPRESENTATIVE SAMPLE WITH SCAT 50-74 PERCENTILE ENTIRE GROUP
11	REPRESENTATIVE SAMPLE WITH SCAT 50-74 PERCENTILE WITH PREVIOUS ECONOMICS
12	REPRESENTATIVE SAMPLE WITH SCAT 50-74 PERCENTILE WITHOUT PREVIOUS ECONOMICS
13	REPRESENTATIVE SAMPLE WITH SCAT 25-49 PERCENTILE ENTIRE GROUP
14	REPRESENTATIVE SAMPLE WITH SCAT 25-49 PERCENTILE WITH PREVIOUS ECONOMICS
15	REPRESENTATIVE SAMPLE WITH SCAT 25-49 PERCENTILE WITHOUT PREVIOUS ECONOMICS
16	REPRESENTATIVE SAMPLE WITH SCAT 0-25 PERCENTILE ENTIRE GROUP
17	REPRESENTATIVE SAMPLE WITH SCAT 0-25 PERCENTILE WITH PREVIOUS ECONOMICS
18	REPRESENTATIVE SAMPLE WITH SCAT 0-25 PERCENTILE WITHOUT PREVIOUS ECONOMICS
19	ENTIRE ECONOMICS SAMPLE
20	ECONOMICS SAMPLE WITH SCAT ENTIRE GROUP
21	ECONOMICS SAMPLE WITH SCAT 75-99 PERCENTILE
22	ECONOMICS SAMPLE WITH SCAT 50-74 PERCENTILE
23	ECONOMICS SAMPLE WITH SCAT 25-49 PERCENTILE
24	ECONOMICS SAMPLE WITH SCAT 0-24 PERCENTILE

* May 1967 Data Summary in Four Junior Colleges

Table 18. SCAT Total Score Range of Each Percentile Band* Identified in Table 16

Percentile Range	SCAT Range
75-99 percentile	303 and above
50-74 percentile	294-302
25-49 percentile	284-293
0-24 percentile	283 and below

*Based upon John J. Risser, S.C.A.T. Table of Percentile Equivalents for 51,531 Students Applying for Admission to California Junior Colleges, 1965. See [42].

Findings

Performance of the samples in this study on the Test of Economic Understanding, summarized in Table 14, show a mean score of 17.2 for representative junior college students, and a mean score of 25.4 for students completing the second semester of economics. To the extent that these samples accurately represent these two groups of junior college students, it may be concluded that students who complete a year's course in economics as a group understand economics better than a cross-sectional representative sample of all junior college students.

Comparison of junior college students with the other studies of performance of high school seniors and four-year college sophomores is summarized in Table 15. These data would infer that the representative sample of junior college students performed slightly better than high school students who had had no instruction in economics but less well than high school seniors who had completed a high school course in economics. The sample of junior college students who were completing a year course in economics at the junior college performed better than high school seniors who had completed an economics course in high school, but performed slightly less well than four-year college sophomores who had completed a college economics course.

The data in Table 16 provides some clues as to the respective influence of ability and instruction in economics. The relationship of economics instruction to knowledge of economics is apparent in all ability groups. The relationship of ability to knowledge of economics is apparent in groups with and without previous instruction in economics, as well as in the group completing a year course in economics in the junior college. This incomplete analysis would seem to justify two inferences of interest to this study: (1) junior college students in every ability quartile are capable of increasing their knowledge of economics, and (2) instruction in economics both at the high school and in junior college is associated with improved understanding of economics.

Chapter 6

JUNIOR COLLEGE VISITATIONS

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purposes of the junior college visitations were: (a) to validate the accuracy of data previously collected, (b) to solicit recommended changes which might improve economics education, and (c) to identify approaches and possible obstacles to innovative activity.

(2) The problem of this section is to summarize subjective evaluations of junior college personnel with respect to the current status of economic education and possible effective future improvements.

(3) The investigative procedure was to visit junior colleges throughout California and elicit through interviews factual and judgmental information from individuals closest to economics instruction in the junior colleges.

Procedure

As part of the inquiry into the current status of economic education in California junior Colleges, a representative cross-section of junior colleges were selected for personal visits by CJCA Field Investigators. The visitation objectives included verifying previously solicited information on courses offered and course content, seeking out evidence of innovation in economics education, and discussing possibilities as to how the extent and breadth of economics education might be improved both quantitatively and qualitatively in California junior colleges. This type of in-depth information could only come from those immediately involved with teaching economics at the junior college level.

The criteria used for selecting the colleges to be visited included their reputation for instructional innovation, college size (the full range of size is represented), personal knowledge of the staff, and region served (e.g., rural or urban). Visits and interviews were completed at 17 colleges throughout the state.

Colleges Visited

Northern California	Southern California
Chabot College	Cerritos College
Diablo Valley College	Chaffey College
Foothill College	Compton College
Gavilan College	Glendale College
Laney College	Golden West College
Merritt College	Long Beach City College
City College of San Francisco	Riverside City College
San Joaquin Delta College	Mt. San Jacinto College
College of San Mateo	

The California Department of Education sent letters to the college presidents explaining the nature of the study. Letters from the field investigators were directed to the deans of instruction who were also advised as to the nature of the study and the purposes of the visits. The deans of instruction were asked to arrange schedules for interviewing: (1) the instructors teaching economics, (2) social science division or department chairmen, and (3) business division or department chairmen. Those to be interviewed received in advance of the visit an outline of the topics to be discussed. In every case, the college cooperation was complete, and the reception cordial.

Reaction to Course Outlines

The reaction to the typical course outlines (see examples in Chapter 3) was generally one of agreement as to what is being taught in the four general categories of economics courses offered by junior colleges. There was some divergence as to the sequential treatment of content, but the courses offered at the junior colleges visited were of the same general molds with only minor exceptions.

Reported Innovative Activity

Identifying innovations in economics education at the colleges visited were of primary importance to the study. Not only are such efforts exemplary, but they undoubtably point the way for larger coordinated efforts which are to be proposed.

Innovative activity in economics education was found to be common at the institutional level (including divisional or departmental efforts), and at the individual instructor level. Examples of the former would include curricular patterns which had been adapted to meet community and student needs, or divisional policy with respect to instructional standards and course integration. Examples of the latter include the efforts by an individual instructor to achieve educational objectives through unique teaching aids or instructional techniques.

At the institutional level, Golden West College has encouraged staff members to apply the latest thinking in education. Innovative efforts there in economic education included explicit statements of student performance stated in behavioral terms. The clarity resulting from such behavioral objectives enable both student and instructor to achieve educational objectives more effectively. Another innovative activity at Golden West College involved team teaching in the general education economics course where one business instructor and one economist shared instructional responsibility. The effect was to encourage the interplay of immediately observed reality and the broader theoretical aspects of economic analysis.

Instructors at Merritt College and Diablo Valley College are jointly developing an experimental reorganization of the two-semester Principles of Economics course. The first semester will be devoted largely to exploring major economic issues and policies and applying basic economic analysis. The course requires preparation of a large quantity of new instructional material. The general goals of the course are to build student interest and motivation and to develop a lasting curiosity about economic problems.

At Compton College, there has been a concerted attempt to better serve the educationally disadvantaged student who cannot achieve or compete successfully in an exclusively academic transfer program. One economics course offered at Compton College had been adjusted to accommodate this need. It was apparent at this college, as with many other colleges visited, that it is very difficult to reach the disadvantaged student through conventional instruction. By and large, such students have not acquired strong basic skills, they cannot understand conventional textbooks, and they are uninterested in many elective subjects. To serve this segment of our junior college students poses a unique instructional challenge to those who believe that education has something to offer all students. It is an area long ignored in economics education.

The business division at Foothill College recently completed an experiment to test the performance of junior college students in Business Economics, when different teaching methods were employed in separate class sections. This experiment involved comparing traditional teaching to the use of a programmed text. One section used a traditional textbook, and was taught by the lecture-discussion method. The other section relied entirely on a programmed textbook. Test results suggest that programmed materials may provide an excellent means of improving the economic literacy of many junior college students.

Another institutional approach to extending economic education is exemplified by the diversity of course offerings at Glendale College. The student who looks at a curriculum menu containing seven courses with substantial economics content may more easily find that course which is palatable in terms of his own needs, interests, and educational goals. Such an approach recognizes the hetrogeneous nature of the junior college student body. The fact that disparate student inputs need not be formed into one uniform intellectual output is anathema to those who espouse an immutable transfer course as the "only" economics.

At the instructor level, it was found that many who teach economics have attempted to supplement the standard instructional resources (textbook, readings, and/or workbook) with use of transparencies, current economic problems, and role playing in the classroom. At Riverside City College an attempt has been made to use the computer to simulate decision making at the macro-economic level (the entire economy), and at the micro-economic level (the business firm). Students participate individually by playing the roles of economic advisors or business executives who must apply textbook theory in simulated "real world" situations. Student response has been very enthusiastic. Additional computerized models are planned for the future.

At Long Beach City College, one instructor has attempted to construct case problems which students attempt to solve in class. At Chaffey and Merritt colleges current events are related directly to textbook materials. Again, the attempt to make economics more appealing and meaningful in terms of relevance is apparent.

By and large, individual instructors' efforts to improve the quality of economics education (by devising supplementary materials, visual aids, problems, or games) were subject to cost and time constraints. Most instructors agreed that this would be a fertile avenue for development under a coordinated cooperative effort.

Other Courses with Economics Content

Interviews with division chairmen confirmed that an appreciable amount of economics education takes place in non-economics courses. Naturally, the amount of economics content in a particular course depends largely on the academic background and interests of the instructor. At most of the colleges visited, Introduction to Business, Marketing and Small Business Management cover some economic principles and institutions. Typically, Introduction to Business contains the most economics content, frequently including such topics as operation of the free-enterprise system, the role of competition, the laws of supply and demand, national income, the role of money, and comparative economic systems. This emphasis on economics reflects the increasing concern among many business instructors about the economic literacy of their students, and particularly non-transfer students. The following illustration suggests the scope of economics content in a general business course offered at the College of San Mateo:

a. Functioning of the Capitalistic System
    (1) Basic freedoms
    (2) Role of profits as incentive for entrepreneurial risk.
b. Forms of business enterprise; with their comparative advantages
c. Consumer economics (personal finance)
d. Impact of automation and mass production on GNP
e. Pricing
    (1) Law of supply and demand as affecting price (market equilibrium theory)
    (2) Government role in pricing--both by legislation and persuasion as they influence imperfect competition.
f. Role of the Federal Reserve System in maintaining an elastic currency. The tools it has available and the forces such as business cycles that affect the money market.
g. Marginal productivity as a factor affecting production planning
h. Competitive wages and the impact of collective bargaining, on management prerogatives and prices
i. International trade as avenue of total marketing:
    (1) justification for it in addition to domestic trade
    (2) balance of payments problems
    (3) theories of absolute and comparative advantage

Many social science offerings include some economics content. United States History and the History of Western Civilizations often provide extensive coverage of economic principles and institutions. Relatively fewer economics topics usually are found in political science, sociology and geography offerings.

Key Problems in Improving Economics Education

The key problems in effectively educating more students in economics involves several elements. Among these are the junior college students, the junior college instructors, the curriculum, and instructional materials and techniques.

It was the general consensus of those interviewed that students are reluctant to enroll in a course which is not required especially when the course is reputed to be difficult. Many junior college students have a low tolerance for theory and a positive aversion to mathematics. Many have poor study skills. In some colleges, the counselors have little or no background in economics, and consequently they make minimal effort to encourage students to enroll in economics courses.

The junior college instructor has heavy teaching responsibilities which sometimes preclude either updating his academic knowledge or his teaching expertise. There is widespread debate as to the desirable instructor qualifications for teaching economics in the junior college. Some educators feel that some junior college teachers are ill-prepared to teach college-level economics due to their lack of initial academic preparation. They maintain that this preparation should include at least a master's degree in economics and in addition perhaps some course work at the doctorate level. Another group of equal size opposes this viewpoint. They contend that the "academic specialist" is unable to relate to junior college students, and the limited curriculum of a junior college causes such an instructor to lose interest in teaching elementary courses. Educators who support this view feel that a broad academic background together with work experience leads to creative teaching which generates student interest.

The junior college curriculum is heavy with other courses required by state law, by the student's major, by his vocational program, by senior colleges, or by perplexing combinations of simultaneously required course mixes. Is there any room for more economics in the programs of most students?

Instructional materials are sometimes inappropriate, outdated, or simply not available. New instructional techniques are little known, seldom understood, and many times yet unproven as effective in a junior college setting.

In some colleges there is a lack of communications and coordination between the economics instructors and the business division. This can lead to inter-departmental jealousy and jurisdictional disputes over which departments should offer economics courses, and who should teach them.

Recommendations for Improvement of Economics Education

Out of these difficulties have emerged recommendations from junior college instructors as to what might be attempted in educating more students more effectively in economics.

One common approach suggested was to attract more students by making economics courses more appealing. This could be done by differentiating course offerings and revising course content. Counseling cooperation was often indicated as helpful in accomplishing this aim. Many instructors thought that students could be motivated to enroll in economics through publicity in the student newspaper and debates on economic problems. Improved articulation with high schools to develop a coordinated program of economics instruction might generate increased student interest in further study in college.

Another approach suggested as a promising means to increasing the exposure of more junior college students to economics instruction was to insert economics topics in history, political science, or an integrated social science course. This recommendation was particularly endorsed by those who believe that economics has become too theoretical and esoteric to be of interest to a broad segment of junior college students.

Some instructors suggested that a one-semester course in economics be required of all transfer and general education students. There were mixed feelings as to the feasibility or desirability of this suggestion. The larger number of uninterested and unmotivated students who would be taking economics under this arrangement was viewed as a possible negative factor.

Some instructors suggested that economics education would become more attractive to students if the educational intents of three types of courses: (1) transfer economics, (2) general economics, and (3) consumer economics were defined in behavioral terms. Each course would be organized to equip the student for distinct roles as: (a) students in economics or business at four-year colleges, (b) citizens in a democratic society, and (c) consumers who must manage their own financial affairs. Three courses and three definable sets of objectives were deemed superior to a smorgasbord course offering, or, at the other extreme, attempting to meet all objectives with one course offering.

The junior college instructors themselves realized and expressed a need for workshops and summer institutes to upgrade their academic knowledge and teaching skills as they related specifically to the teaching of economics at the junior college level. Most instructors expressed the view that incentives were needed (e.g., unit credit and financial compensation) in order that instructors might undertake these upgrading obligations. An alternative suggestion was to organize in-service training programs which would bring personnel and equipment to each junior college for training purposes. Most divisional chairmen felt that if such training were provided, it should not be limited to economics teachers, but should be made available for business and other social science instructors as well.

Many instructors mentioned a willingness to offer new courses in economics, or to alter the content and objectives of existing courses. A few expressed interest in offering courses to some students on a pass-fail basis. Most expressed an eagerness to participate in research activity leading to the improvement of economic education.

The need for developing improved instructional materials and techniques, and particularly the need for evaluating such materials and techniques on a cost effectiveness basis was expressed often and in many ways. The individual instructor cannot adequately devise instructional aids, devise new teaching approaches, and scientifically evaluate those approaches in isolation. Cooperatively, instructors from several colleges might combine their talents and efforts productively.

Obstacles Impeding Improvement

Possible obstacles to innovative research in economics education in junior colleges include the costs involved, articulation difficulties, institutional and/or faculty resistance to change. To the latter obstacle it was sometimes mentioned that discord between divisions in the college impeded change, or that the administration discouraged attempts to track students, or that there was little hope of inducing lethargic instructors to seek self-improvement.

The overall impression remains: something must be done, and now seems to be a most propitious time to attempt at least partial solutions to the problems of economics education. To this end the admonition was "Godspeed."

SUMMARY, PART I, STATUS STUDY

The current status of economics education in California junior colleges has been delineated in the previous sections as accurately as possible within the constraints of accessible information available to staff investigators.

A number of valid conclusions may be drawn from the quantitative and qualitative evidence presented. Among the most prominent are:

1. Currently, the principal effort in economics education in the junior colleges centers around the transfer Principles of Economics course. This is true both in terms of course offerings, and in terms of student enrollment in economics.
2. Less than five per cent of all junior college students enroll in any course in economics.
3. There currently exists a widespread general agreement as to course content among the four categories of courses offered in the junior colleges.
4. Test data indicate that a significant improvement in economic literacy occurs when students have completed a year's course in economics. The level of economic literacy among typical junior college students remains only slightly higher than that of typical high school seniors who have not had any exposure to an organized economics course.
5. It was a widely held opinion among teachers and administrators close to economics instruction at the junior colleges that, while some innovative activity already exists, there is a great need for a coordinated developmental program in economics education.

Recent efforts to improve economics education at other levels, and tentative recommendations to improve economics education in the junior colleges, are the areas of focus in the following chapters.

PART II. RECOMMENDED IMPROVEMENTS IN ECONOMICS EDUCATION IN CALIFORNIA JUNIOR COLLEGES

Chapter 7

REVIEW OF EFFORTS TO IMPROVE ECONOMICS EDUCATION

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section is to review and identify significant efforts to improve economics education in the various levels of our educational system.

(2) The questions answered by this section are, (a) "What has been previously attempted in the way of improving economics education?", and (b) "What deficiencies remain with respect to elementary collegiate economics?"

(3) The procedure of this section was to review published literature on economics education, abstract the substance of past and current efforts, and construct inferences with respect to economics education in the junior colleges.

> The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else.
>
> John Maynard Keynes

> Everyone must to some extent act as his own economics--in private life and as a citizen--and both he and the community will be better served if he is well informed and can think objectively about economic questions.
>
> National Task Force on Economic Education

The past decade has witnessed a growing concern with the nature and scope of economics education in the United States. Educators and economists, as well as leaders from business, labor and agriculture, have become increasingly convinced of the desirability of raising the level of economic literacy among Americans. The American Economic Association in cooperation with the Committee for Economic Development and the Joint Council on Economic Education has spearheaded recent efforts to improve the scope and quality of economics education.

The future of our nation is largely dependent on the level of economic understanding among its citizens. Americans are faced with a multitude of economic problems on two levels. First, we must make numerous daily decisions as consumers in a free enterprise economy. As our economy grows and becomes increasingly complex, the need for economic understanding becomes more imperative. Moreover, as citizens in a democratic society, we are called upon to vote on a host of issues which have economic implications. The need for improved economic literacy was repeatedly emphasized by the National Task Force on Economic Education [36, pp. 7-8]:

> Economic understanding is essential if we are to meet our responsibilities as citizens and as

> participants in a basically private enterprise economy. Many of the most important issues in government policy are economic in nature, and we face economic problems at every turn in our day-to-day lives...If they are to exercise their great political power responsibly and effectively, more of our people must know more about our economy and must learn to think about economic issues objectively and rationally. The alternative is to make decisions on the basis of ignorance and prejudice.

Economics has enjoyed a revolution in popularity in recent years. Almost every newspaper and magazine abounds with articles on "the new economics" and the dilemma of "guns or butter." Government policy makers increasingly seek the advice of economic experts on a multitude of problems, and names of prominent economists are becoming more familiar to the public. The interest in economics is partially explained by the growing recognition that many individual and national problems have economic implications. The depression of the 1930's, the Second World War and subsequent conflicts, as well as the expanding competition with the communist world have all focused attention on economics.

The ascendancy of economics has been accompanied by efforts to improve economic education. The Committee for Economic Development, consisting of 200 leading businessmen and educators, was established following World War II. This organization has demonstrated an active interest in raising the level of economics literacy, especially among high school and college students. In 1949 the CED participated in the formation of the Joint Council on Economic Education, a nonpartisan organization which has helped to upgrade the instructional competency of hundreds of teachers.

The National Task Force

A major breakthrough in economic education occurred in 1960 when the American Economic Association in cooperation with the CED appointed a National Task Force on Economic Education. The Task Force, composed of a group of prominent economists, was charged with the responsibility for developing a core of economic concepts which would provide the basis for economic instruction in the high schools. In 1961, the Task Force published its report, Economic Education in the Schools. It stressed that the major objective of economic instruction must be to help the student to think rationally about economic problems. "The most important step toward understanding in economics . . .is the replacement of emotional, unreasoned judgements by objective, rational analysis" [36, p. 14].

The AEA next co-sponsored a year-long television course, entitled "The American Economy," which was shown throughout the United States in 1962-63 and was subsequently made available to schools and colleges. The course was designed to improve the level of economic understanding among school teachers, students and the general public [32, p. 403].

Following the completion of "The American Economy," the National Opinion Center conducted a study to evaluate the effectiveness of the televised economics course and to determine the nature and scope of economics instruction in the high schools. At the same time, a group of leading educational psychologists, economists and high school educators developed a "Test of Economic Understanding" designed to help the high schools to measure the level of economic literacy among their students and to analyze the effectiveness of economics instruction [43].

Primary and Secondary School Efforts

The leadership of the AEA, the CED, and other organizations has generated a renewed interest in economics education among high school educators, and there is little doubt that the quality and scope of economics instruction is improving. However, fewer than half the nation's secondary schools offer a separate course in economics, and even when such a course is offered the coverage tends to be largely descriptive rather than analytical [2, p. 339].

A particularly exemplary effort to foster greater economic literacy in primary and secondary schools has been the JCEE's Developmental Economic Education Program (DEEP). As of fall, 1966, thirty major school systems across the nation were participating actively in the program. Under a general plan to explicitly develop economic understandings through an organized procedure according to the abilities of students from kindergarten through the twelfth grade, DEEP has initiated changes in curricula, teacher training in economics, and new instructional materials for all grade levels. Three of the DEEP pilot systems are located in California.[10] An evaluative process functioning within the program should yield major contributions to economics education once the results are published.

Improvement Efforts in Four-Year Colleges

There has also been increasing concern with teaching among college and university economists [26 and 27]. However, fewer than half of all college students even take one course in economics. There is evidence to suggest that most college-level introductory courses in economics are not particularly effective in improving economic understanding. In several recent articles, George L. Bach, who headed the National Task Force on Economic Education, presented an analysis of the results of administering the "Test of Economic Understanding" to over 4,000 students and teachers throughout the country [2 and 4]. Of particular interest is the fact that there was no significant difference in test scores between those who had taken one or two college economics courses and those who had never taken a college course in economics. There still would appear to be ample room for improvement in economics instruction in institutions of higher education.

Junior Colleges

As the fastest growing segment of higher education, the junior college would seem to offer the ideal setting for attacking economic illiteracy. California is at the forefront of the junior college movement, with 80 colleges enrolling 571,000 students. This represents 70 per cent of all full-time freshmen and sophomores in California public higher education. Moreover, a substantial proportion of the junior college students are adults who are continuing their education. The system is expanding rapidly, and it is anticipated that total enrollments will approach one million students by 1975 [48, pp.14-15].

Unfortunately, there is little evidence of a widespread and concerted effort to improve economics education in the junior colleges. All California public two-year colleges offer a two-semester principles course which parallels the introductory courses in the state college and university. In addition, most junior colleges offer a variety of lower level courses ranging from Economic Problems to Consumer Economics. However, only a small fraction of junior college students ever take a course in economics.

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[10] Contra Costa County, Downey, and San Diego County.

The challenge to the junior colleges is clear. A democratic society can only function effectively if its citizens can make carefully reasoned judgments about economic issues. With an increasing proportion of high school graduates enrolling in the junior colleges, and with increasing enrollment of adults, these institutions are in a strategic position to play a key role in improving the level of economic understanding of the communities they serve. Two major questions remain unanswered: when and how should the junior colleges meet this challenge? This study may provide some clues.

A Review of Innovative Efforts In Collegiate Economics Education

Today, there is increased concern with economic illiteracy and what may be accomplished in raising the level of economic understanding among citizenry. Illiteracy exists not only when people don't study economics, but even when they do [3, p.505]! Many economists have turned from their academic pursuits (talking to one another in terms of pure theory and research on theory) to ask themselves how they may teach what they know more effectively [28]. The result has been a widespread but disorganized proliferation of experiments in elementary collegiate economics [22 and 23]. Some of the innovative activity has been concerned with applications of new educational techniques--of new instructional materials, new hardware, or new structuring of the learning process. Other innovative efforts have taken a more conservative tack in trying to improve the traditional Principles course through reorganization, updating of content, seeking new approaches to established principles, or re-creation of the principles course through explicitly stated objectives in behavioral terms.

Whatever the approach taken, the published results have been singularly deficient of careful research design, or subjected to the scientific method whereby one proceeds from carefully stated hypotheses to qualified conclusions. As a result, economists have few tested and verified pedagogical results upon which they may design an effective elementary economics course, given student characteristics and educational objectives.

A summary of innovative activity in economic education which may hold future promise for junior colleges in California and the nation comprises the remainder of this Chapter. While most published experimentation in economics has originated in four-year institutions, it should be kept in mind that junior colleges have differing goals, student characteristics, and instructional resources.[11]

Course Design and Content

Perhaps the least radical variation in elementary economics courses has been in the way content is presented. At some institutions the emphasis has been on a rigorous theoretical analysis, often presented mathematically. On the other hand, many institutions favor a nonmathematical treatment of economic principles, stressing economic institutions and problems. Some colleges use one method the first semester, and another in the following semester, or offer alternative sections for students of different backgrounds or goals.

Some colleges have developed a short "nutshell" principles course designed for those who do not intend to continue in economics or business and desire only general information as to how our economic system operates. Such courses typically cover a limited amount of theory and generally emphasize macroeconomic policies and problems.

A third variation in presenting economics has been the use of economic history as a vehicle for presentation of principles or problems. Again, this approach examines economic problems and evolving institutions which man devises to achieve national economic goals. Economic thought is the string which connects the beads (isolated events) of history.

The sum effect of course revision has been minor differentiation of elementary economics courses. We behold the specter of the blind men and the elephant, each man having his own opinion as to what "economics" really is. To a certain extent, however, course differentiation (or proliferation) may be clearly justifiable. Once an educational institution sets its objectives in economic education, analyzes student characteristics, and evaluates operational constraints, it becomes at once obvious that no one economics course will serve all objectives, students, and educational institutions equally well. Whether junior colleges will find it desirable to move toward uniformity or diversity in economics courses offered remains to be seen.

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[11] See "Visitation Summaries" for a picture of innovations in economic education at selected California junior colleges.

New Instructional Techniques

The traditional elementary economics course is a lecture class. Many of the larger universities have found that budget and manpower considerations dictate that large lecture sessions be held in the elementary courses. These institutions believe that a lecturer speaking to hundreds of students through a microphone was just as effective as a lecturer speaking to thirty students--or certainly no worse.

The lecture method is not inherently bad, but it has been overused and ineptly used. It is an inefficient method of conveying many types of information. It is not without reason that economics has a reputation as a dull, dry, abstract, useless, irrelevant subject. It may be inferred that depersonalization has a concomitant characteristic of meaninglessness.

One of the most common efforts in improving economic education today is the endeavor to turn passive student notetaking into active student participation in the learning process. This may be accomplished within the context of the lecture course by conducting small discussion sessions, workshops, problem sessions, panel discussions, etc. More recent efforts to stimulate student interest in economics through their active participation have utilized the new pedagogical hardware and software available as a by-product of modern technology. New instructional media may be used in conjunction with the large lecture course or with any other class structure.

Programmed instruction is one of the new educational developments currently in vogue. Programmed instruction does not necessarily mean "teaching machines" or other stereotyped notions. Programmed instruction may utilize any media (e.g., flashcards, lecture, television, textbooks, computers), have widely differing presentation variables (e.g., prompting and confirmation, branching, stepsize), and deal with a number of response modes (e.g., overt, convert, multiple-choice, fill-in, constructed responses). Three common media in use in programmed economics instruction today include (1) television, (2) computer assisted instruction, and (3) programmed textbooks. In each of these media there is an ordered sequence of items, the student works in "short steps," responds actively as he progresses, works at his own pace, and receives reinforcement for correct responses.

A number of experiments have been conducted in programmed instruction which indicate that students do learn from such programs. But the more relevant question is: How well do students learn from programmed instruction as compared to conventional instruction? The answers are not yet clear. One experiment using the medium of television concluded that at least students don't learn less [39, p. 3]. Another experiment concluded that certain programmed textbooks were successful in teaching elementary economics, but perhaps not at the junior college level [29, p. 656]. It is clear, however, that programmed instruction permits independent study by motivated students, and releases class time from drill for more interesting presentations, such as debates, guest speakers, roundtable discussions, applications of theory to current problems, etc.

Video tapes and films can also be utilized in ways which enhance student interest. World renowned figures, famous professors, or unusual debates may be captured by one of these media and replayed in classrooms everywhere. Since cost per student declines with widespread distribution of such audio visual techniques, this quite often allows extensive preparation of economic models, graphs, on site inspections, etc., which provide sensory stimulation, classroom variety, and immediateness. Transparencies and overhead projectors also facilitate an advantageous presentation of data, graphs, and flow diagrams which would otherwise be blackboard labor lost. However, presently available audio visual materials are generally dated, of poor quality both physically and in terms of content, and are relatively inaccessible.

Games and simulated situations are additional techniques which may be employed to teach economics with students playing active roles in the learning process [25]. The basic notion here is that by structuring a situation approximating the "real world," students learn or discover for themselves the major principles upon which economics is based. Such games may range from labor-management negotiations, to business firms competing in markets, to a simulated computerized national economy with students making decisions which affect GNP, the price level, and employment [28]. Students thus actively participate in the learning process and are motivated by the personalized classroom interaction.

Finally, it should be pointed out that conventional instructional materials such as textbooks, workbooks, and supplementary paperbacks and readings have improved in content, quality, visual interest, and intellectual stimulation. This has been a highly competitive field. However, the better available materials have been concentrated in the transfer Principles course.

It may be well that the teaching economists have yet to become "technique happy" and totally enthralled with the new and emerging technology, adopting each fad as it comes along. To do so would possibly be at the expense of substance. But it is nevertheless clear that the new educational technology can have a significant impact upon the efficiency of education in economics and affect both the quantities of students reached and the quality of economics education. The problem remains to evaluate these techniques and to separate the wheat from the chaff on a cost-effectiveness basis [18 and 21].

It should be pointed out that junior college students have more heterogeneous characteristics than students in any other type of college. This means that not only must our course offerings be varied, but we must select an assortment of media and techniques consistent with the variety of our students. Material may be presented in a variety of ways to intensify learning--which is not the equivalent of teaching.

Instructor Preparation

Retooling our labor force has become increasingly important. The junior college instructor too often finds himself (1) not having the time to read the latest literature due to heavy class loads and pressures, or (2) finding graduate study irrelevant for his professional needs, or (3) finding insufficient incentives within the junior college environment encouraging him to take a leave of absence for needed work. Typically, superannuation is not the problem. Obsolescence is.

Each year the quality of students enrolling in our colleges increases. Our secondary schools are upgrading their products, i.e., students with academic abilities and skills. It may very well be that within a few years special sections of the transfer economics course in the junior college will utilize substantial amounts of calculus. How may teaching economists upgrade themselves with respect to such skills? N. D. E. A. institutes and a few of the privately endowed foundations have provided some opportunities for such refresher study.[12] A substantial void still remains.

The crucial questions in regard to quality instruction are: 1. What constitutes quality instruction? 2. How do you measure the qualitative factors involved in instruction? 3. If student achievement in attaining the goal of economic literacy is used as a measure, how do you measure the teacher's contribution to that joint product where the teacher's role is only one input among several variables in any course? If these questions were answered, then quality instruction might be given its just reward, and the matrix of incentives in college teaching could be advantageously altered.

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[12] Primarily for high school teachers or those who need to complete degree or credential requirements (correct deficiencies).

Chapter 8

OBJECTIVES IN ECONOMICS EDUCATION

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section is to present the problems and procedures involved in specifying the educational intents of economics instruction.

(2) The problem of this section was to compile basic student competencies sought in economics education.

(3) The procedure of this section was to review past efforts to define economic literacy in terms of goals, general objectives, and specific behavioral objectives, and to indicate possible areas in which clarifications are in order.

Introduction

The hue and cry of "economic illiteracy" echoes across the nation. Economists have grabbed their lances, jumped on their horses, and have ridden to joust with the enemy. Their cause is just, and yet their objectives are not clear. The allegorical profundities of Don Quixote strike home.

It is clear that a realistic appraisal and definitive statement of objectives must be decided upon before any significant effort to improve economics education can proceed. If the sum goal of economics education in the junior colleges is economic literacy, the questions immediately arise, "What is an economically literate person? What does he know? How does he behave?"

There are difficulties in defining economic literacy. Yet, if an attempt is not made to clarify the objectives of economics education, the probability of successfully designing learning situations to achieve the nebulous goal of economic literacy is quite small.

It is a major finding of this section that previous efforts to improve economics education through agreement on specific objectives have so far been relatively unproductive. The term "specific objectives" does not refer to general course objectives (as exemplified in Chapter 4). Specific objectives, or behavioral objectives, are statements of educational intents which denote measurable student attributes once students have completed a course of study [30]. In specifying behavioral objectives one specifies what the student will be able to do at the end of a course in economics. For example, consider the following objectives:

(1) Students should understand how a market economy operates.
(2) Given a supply and demand graph, students will explain why there is a normal tendency towards a market clearing price.

The first statement is a general statement which does not succeed in communicating the writer's instructional intent. The second statement is stated in specific terms describing what the student will be doing once he has learned about the market economy and the price system. One has a better chance in communicating educational intents if a separate statement for each objective of the course is written [30, p. 53].

There are a number of advantages in specifying behavioral objectives in economics education. If clearly defined goals written in behavioral terms exist, it is possible to evaluate any course or program accurately. Both instructor and student know at the beginning of the course precisely what is to be accomplished. The effectiveness of instruction is measured by how well the stated objectives have been met in terms of the student's terminal performance.

Once specific behavioral objectives have been written, it is possible to select test items to assess whether the student can demonstrate the acquisition of desired skills, knowledges, or attitudes. Test items should be derived from stated objectives. The student does not have to wonder about what will be on the test. The instructor will also be able to evaluate student achievement with greater precision.

Finally, the selection of textbooks, visual aids, course content, and instructional techniques will be based upon how well they assist students in achieving the objectives specified.

It is clear that in terms of evaluation alone, the specification of objectives is worthwhile. Any research designed to evaluate improvements in economics instruction will necessitate prior preparation of clear objectives.

Implications for Instruction

If specific behavioral objectives exist for economics instruction, a number of predictable changes will occur [10].

1) Courses will be more tightly structured and standardized. No longer will an instructor "talk about" economics in the classroom. The instructor will have clear goals in mind when he enters the classroom.

2) More tests will be given, both as learning tools, and for evaluative purposes for student and instructor.

3) Tests will be more easily graded since performance criteria are included in the statement of educational intents. It will be possible to ascertain precisely why a student was unable to achieve the specific objectives of the course. Standardized tests will become commonplace.

4) Logical sequences in the subject matter will be developed to facilitate learning.

5) Emphasis in teaching will center upon the learning process and teaching effectiveness.

6) Teachers will become more efficient in designing learning situations to achieve desired objectives.

7) Students will know exactly what is expected of them, and will find learning aids available which match their abilities and individual rate of progress in the course.

General Difficulties in Writing Objectives in Economics

Part of the difficulties in writing specific behavioral objectives for elementary economics lies with the subject matter, part with economists, and part with the students themselves.

The social science we call "economics" has rather fuzzy frontiers. Its content is blended with history, with the behavioral sciences, with values and ethics, with mathematics, and with the political process. The science that deals with production, distribution, and consumption is a miscible subject, rarely found in real life in a pure, unadulterated condition. In fact, it's often the impurities which make the subject palatable, relevant, and meaningful. In viewing economic policy, for example, value judgments are inescapable and desirable. The areas of personal and collective choice can be stated in coldly scientific terms, but the choice is rarely between a good and a bad alternative. Most often choice and decision making involves choosing the "best" mutually exclusive alternative, or giving up part of something "good" in order to obtain more of something "better." Economic analysis can help one to weigh alternatives and make competent, responsible decisions, but the analysis in itself often offers no concrete preordained conclusion for which a teacher may construct test items. This is most obviously true when dealing with current economic problems such as inflation, unemployment, national defense, or poverty. Can we test the terminal behavior of a student when we dare not prescribe what conclusions he should draw, given the tools of economic analysis?

Another difficulty lies with the various species of men teaching economics. They are economists, and all consider

themselves authorities in that expansive subject, economics. Economics is sometimes defined as what economists do. Economics in the colleges is most certainly what economists teach. The difficulty is that each economist teaches a different course. Even when content and objectives, textbooks, and methods of instruction are specified, there is a wide discretionary latitude within which the economics instructor may operate. Not surprisingly, some elementary economics courses turn out to be vigorous presentations of pure theory, while others teaching the "same" course may devote considerable time to the stock market and family finance, or making business decisions. It is more accurate to list a course as "Professor Smith's Economics, vintage 1958" than to print merely "Principles of Economics." Woe unto the person(s) who write behavioral objectives for Professor Smith, for they shall be crucified on the Greek cross of academic freedom.

Still another difficulty in specifying objectives lies with the heterogeneous group of junior college students with their multiple aptitudes, interests, objectives, motivations, and needs. Should we write one set of objectives for such disparate student inputs? Should all students be of one standardized intellectual mold? Is there one and only one brand of economic literacy, or are there various levels of economic understanding which should be devised to meet the various levels of student abilities and needs? If the profession is teaching economics to students, the student should be analyzed as carefully as the subject matter.

The difficulties remain, and this is by no means a comprehensive exposition of them. But because a task is difficult, it does not necessarily follow that it should not be attempted. Who has the expertise, the prestige, and the audacity to write specific behavioral objectives describing an economically literate student? And how will we know when we have produced such an individual?

General Objectives of Economics Education

The most significant and widely accepted effort to develop a comprehensive set of general objectives in economics education has been the statement by the National Task Force on Economic Education. The following exposition is an attempt to summarize the broad goals of economic education developed by the National Task Force on Economic Education. The following summary is based on three publications: (1) Committee for Economic Development, Economic Literacy for Americans, New York, 1962; (2) National Task Force on Economic Education, Economic Education in the Schools, New York, 1961; and (3) Joint Council on Economic Education, Interpretive Manual and Discussion Guide, Test of Economic Understanding, Science Research Associates, Inc., Chicago, 1964.

In 1962, the CED published a major policy statment on economic literacy. This report emphasized that one of the major obstacles to economics education in the past had been the failure to establish educational goals. "Without goals for economic education it has been impossible to test for attainment of economic understanding. School systems which do offer economics have been unable to measure adequately the success or failure of their programs" [12, p. 13]. However, the same CED publication hailed the National Task Force report (TFR) as a satisfactory definition of goals for economics education. "We believe that the Task Force report satisfies the purpose of defining the subjects essential for a reasonable understanding of the modern economic system. . ." [12, p. 17].

The Test of Economic Understanding is based on the Task Force report. The authors imply that their test is an adequate tool for measuring economic understanding, and therefore the test serves as a definition of economic literacy [43].

The first two chapters of the Task Force report underline the critical need for economic literacy and stress that rational analysis is the key to economic understanding. The report states that "the development of economic understanding involves first and above all the capacity to think rationally about economic issues" [36, pp. 13-14]. This emphasis on analysis is echoed in the CED's summary of the TFR: "Economics is a rational way of thinking about economic issues"[12, p. 28]. However, the Task Force then proceeds to define economic literacy in terms of "the minimal understanding needed for effective citizenship in the modern American economy"[36, p. 22]. Chapter Three of the report consists of a forty-two page description of the essential principles, concepts, institutions and facts which the student should understand in order to become economically literate. An attempt to summarize this body of essential economic "knowledge" follows.

The Task Force report organizes the material essential for economic understanding around three basic economic problems: (1) What shall be produced and how much?, (2) How much in total can be produced, and how fast shall the economy grow?, and (3) Who shall get the goods and services produced? These questions provide an organizational framework consisting of four major sections: (A) The Fact of Scarcity, (B) Economic Growth and Stability, (C) The Distribution of Income, and (D) Communism, Socialism, and Capitalism.

A Condensed Version of the Task Force Report[13]

A. Understanding the Fact of Scarcity

1. The basic fact of scarcity gives rise to the need for economizing.

2. Different economic systems solve the basic economic problems in different ways, but all systems are concerned with allocating scarce resources among alternative uses.

3. Students should understand the operation of the free enterprise system which involves the interaction of supply, demand and prices in markets.

   a. Profits provide the incentive for businessmen to meet consumer needs, and profits also provide a source of funds for business investment.
   b. Competition regulates self-interest, and prices allocate resources among alternative uses.
   c. Governments control a substantial portion of our resources through taxation and public expenditures, and they also establish "rules of the game" within which the private sector of the economy operates.

4. Students should realize that international trade involves specialization and exchange which results in a larger total quantity of goods produced with a given supply of resources.

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[13] Permission to use this condensed statement was granted by George L. Bach, Chairman of the Task Force.

a. They should understand the concept of international balance of payments as well as the arguments for and against tariffs.

The Fact of Scarcity-Concepts

-Scarcity--the need for economizing
-Costs--opportunity (or alternative) costs, money costs
-Productive resources--factors of production
-Division of labor, specialization, and exchange
-Economic production--conversion of resources into desired output
-Saving, investment, capital formation
-Labor productivity
-Principle of diminishing returns
-Demand, supply, price
-Market
-Competition
-Profit, profit incentive
-Interdependence--the price and market system
-Economic efficiency
-Monopoly, anti-trust laws
-Public utility
-Corporation, balance sheet, profit and loss statement
-Government expenditures and taxes in allocating resources
-Taxes--corporation income tax, personal income tax, property tax, sales tax, payroll tax
-International specialization
-Balance of payments, balance of trade
-Tariffs

B. Understanding Economic Growth and Stability

1. Students should see that many economic problems center around how to obtain stable economic growth--the avoidance of inflation and depressions.
    a. Students should be familiar with the measures of national income and production, particularly the concept of gross national product.
    b. They should understand that the real economic output is determined by its stock of resources and the level of total spending which consists of expenditures by consumers, business firms and governments.
2. Students should see that government budget policy

(the creation of surpluses and deficits) can influence total spending and thus the level of income, employment and prices.

3. It is essential that students understand roughly the process by which the money supply is controlled through private and governmental decisions.

4. Students need to understand that economic growth depends on investment and the expansion of total spending.

Economic Growth and Stability-Concepts

-Gross national product rational income, per capita product and income
-Money and real income
-Price level
-Equation of exchange
-Aggregate demand (total spending), and components of aggregate demand (consumer spending, business spending on investment, government spending)
-Business cycle, depression, inflation
-Money--bank deposits and money creation through lending
-Central bank--Federal Reserve System
-Government budget, fiscal policy, public debt
-Economic growth
-Underdeveloped areas
-The population problem

C. Understanding the Distribution of Income

1. Who shall receive the goods and services produced depends on the distribution of income which is determined by the market mechanics and is modified by governmental taxation and spending policies.

   a. Students should understand that high American wages rest fundamentally on the high productivity of American labor.
   b. The four major classes of income are wages, interest, rent and profits.

2. Students should see that American workers have increasingly organized themselves into unions to improve their bargaining power vis-a-vis employers.

The Distribution of Income-Concepts

- -Incomes as payments for productive services--productivity as a basis for receipt of incomes
- -Personal distribution of income
- -Real and money wages
- -Labor unions-collective bargaining
- -Strikes,picketing, closed shop, featherbedding
- -Economic security as a goal
- -Social security, unemployment insurance, old-age insurance, private security measures
- -The farm problem

D. Understanding Communism, Socialism, and Capitalism

1. Every informed American should have a general impression of how other types of economic systems operate, especially communism.
    a. The allocation of resources in a communist society is determined basically by central planners, not by free consumer demands.
    b. In the communist society nearly all capital goods and natural resources are owned by the state.
2. The same broad question--what, how much, and for whom--provide a framework for comparing alternative systems with ours.

Behavioral Objectives Derived From the Test of Economic Understanding

The Test of Economic Understanding was constructed using the general objectives as stated by the National Task Force. If it is agreed that the Test of Economic Understanding is an acceptable valid measure of economic literacy to be attained by students, it should be possible to derive from the test items those elements of economic literacy conceived to be most important, and to write specific behavioral objectives for each item.

It should be noted that the conventional procedure is to state behavioral objectives first, and then derive test questions. However, since no widely accepted set of specific behavioral objectives currently exist, it was thought desirable to attempt to work backwards from a test based upon accepted general objectives.

An attempt was made to write behavioral objectives based upon 25 items of the test explicitly stating the educational objectives assumed when the test questions were constructed. Three examples should suffice for illustrative purposes:

General Objective

1. Students should understand the basic fact of scarcity.

Specific Behavioral Objective

1a. Students shall differentiate between scarcity and shortages, recognizing the latter as peculiar to specific items in certain markets.

General Objective

2. Students should see that many economic problems center around how to obtain stable economic growth.

Specific Behavioral Objective

2a. Students shall identify business investment as being the most volatile of the three major components of GNP.

General Objective

3. Students should see the distribution of income as resulting from the market mechanism and as modified by governmental taxating and spending.

Specific Behavioral Objective

3a. Students shall identify high salaries or wages received by individuals as basically dependent upon the demand for their services relative to the supply of such services.

Please note that many additional specific behavioral objectives must be written in order to encompass the general objectives stated in the preceeding examples.

Difficulties Encountered in Writing Specific Behavioral Objectives Using the Test of Economic Understanding

An analysis of 25 test items along with corresponding specific behavioral objectives revealed insurmountable difficulties in accomplishing the original aim, viz., describing what a student will be doing when he demonstrates economic literacy.

One difficulty involved the test form itself. The Test of Economic Understanding is a 50 item multiple-choice examination. The terminal behavior of a student demonstrating economic literacy involves identifying correct answers. Yet, one of the emphasized elements of the National Task Force Report was the need for rational analysis. Students therefore should learn the tools of analysis and be able to apply analytical techniques to any specific set of problems where such techniques are applicable. This involves more than identifying correct answers, or memorizing specific responses.

The objectives derived from the test items were seldom clean and precise. At times, test items seemed to sample several objectives simultaneously utilizing but one test question. If a student answers such a test item incorrectly, it is impossible to ascertain why he missed the question. Moreover, certain questions assume antecedent student knowledges or abilities which must be mastered before the test items are attempted. This involves relating the specific behavioral objectives of one test item with the behavioral objectives necessary for background knowledge on the part of the student. Behavioral objectives cannot exist in isolation. They must be constructed in a logical progression in order to be meaningful.

Finally, the use of words such as "private-enterprise economy" in behavioral objectives leads to difficulties. Such a phrase does not clearly convey educational intents since it is subject to many interpretations. In many test items phrases such as "the role of government in a private-enterprise economy," "individual freedom," "economic insecurity" appear in conjunction with cognitive objectives, perhaps because the writers wished to stick with empirically valid content but were unable to avoid content involving judgments or values.

Conclusions

It was the original intent of this portion of this study to create objectives appropriate to the junior college teaching and junior college students. Because of the difficulties involved, and because such an effort would require more sustained study than could be given to it by the staff, it was decided to abandon such a prodigious undertaking at this juncture.

As a substitute for an approved list of objectives, this section reviewed previous efforts and statements, delineated the difficulties involved in specifying behavioral objectives, and has shown the improbability of extracting effective objectives from previous test instruments.

It is therefore the major finding of this section that substantial attention must be given to the preparation of behavioral objectives before further analytical and experimental study will be productive in economics education.

A Starting Point in Specifying Objectives

When explicitly stating educational intents in behavioral terms, it should be apparent that perhaps three sets of objectives will be necessary to satisfy the goals of the following three types of economics courses appropriate to junior college instruction:

1) Principles of Economics This course intends to prepare the transfer student for upper division work in economics or business at a four-year college.

2) General Economics This course intends to prepare the student for his role as a citizen in a democratic society.

3) Consumer Economics This course intends to prepare the student for his role as a consumer in a market economy.

Three definable roles will necessitate three sets of objectives, with certain amounts of overlap. In addition, it is possible to construct objectives based upon a learning hierarchy. For each set of course objectives test items may be constructed at various levels of abstraction and difficulty. For example, the College-Level Test of Economic Understanding is being constructed with equal numbers of questions devoted to identification (i.e., recognition and understanding) of economic concepts and principles, simple applications, and complex applications [16].[14]

There has been an attempt to create a taxonomy of educational objectives based upon a learning hierarchy in two distinct domains: *cognitive* (factual), and *affective* (valuing). Using such a construct holds implications for those who write behavioral objectives in economics.

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[14] This test is currently undergoing pretesting before being published by the Psychological Corporation, 304 E. 45th St., N.Y., N.Y. 10017, late in 1967 and early 1968.

A Condensed Version of the Cognitive Domain of the Taxonomy of Educational Objectives [7]

- 1.00 KNOWLEDGE
  - 1.10 KNOWLEDGE OF SPECIFICS
    - 1.11 Knowledge of Terminology
    - 1.12 Knowledge of Specific Facts
  - 1.20 KNOWLEDGE OF WAYS AND MEANS OF DEALING WITH SPECIFICS
    - 1.21 Knowledge of Conventions
    - 1.22 Knowledge of Trends and Sequences
    - 1.23 Knowledge of Classifications and Categories
    - 1.24 Knowledge of Criteria
    - 1.25 Knowledge of Methodology
  - 1.30 KNOWLEDGE OF THE UNIVERSALS AND ABSTRACTIONS IN A FIELD
    - 1.31 Knowledge of Principles and Generalizations
    - 1.32 Knowledge of Theories and Structures
- 2.00 COMPREHENSION
  - 2.10 TRANSLATION
  - 2.20 INTERPRETATION
  - 2.30 EXTRAPOLATION
- 3.00 APPLICATION
- 4.00 ANALYSIS
  - 4.10 ANALYSIS OF ELEMENTS
  - 4.20 ANALYSIS OF RELATIONSHIPS
  - 4.30 ANALYSIS OF ORGANIZATIONAL PRINCIPLES
- 5.00 SYNTHESIS
  - 5.10 PRODUCTION OF A UNIQUE COMMUNICATION
  - 5.20 PRODUCTION OF A PLAN, OR PROPOSED SET OF OPERATIONS
  - 5.30 DERIVATION OF A SET OF ABSTRACT RELATIONS
- 6.00 EVALUATION
  - 6.10 JUDGMENTS IN TERMS OF INTERNAL EVIDENCE
  - 6.20 JUDGMENTS IN TERMS OF EXTERNAL CRITERIA

Within these general cognitive guidelines, it is possible to write a hierarchy of educational objectives in economics education. Courses of different levels of difficulty may also be constructed. For example, under a topic of supply and demand (price determination) one might specify two objectives of unequal difficulty:

KNOWLEDGE (1.0)

Students shall identify supply and demand forces as being the primary determinants of prices in a private enterprise economy.

ANALYSIS (4.0)

Students shall be able to analyze and list the effects of a price floor as it affects market price, quantity supplied, quantity demanded, and clearing the market.

There is a distinction in economics between positive statements (what is) and normative statements (what ought to be). Positive statements may be verified by an appeal to the facts. Normative statements are those which make value judgments, and cannot be verified merely by an appeal to facts. Those who believe that economics should be an empirical science teach positive economics. Those who are concerned with totality of real world economic problems cannot avoid normative statements, assertions, or theories. Economic formulations occur in a social and historical setting and concern themselves with that setting. How often do we find supposedly expunged normative elements affecting our perceptual screens? The attempt to create a value-free science of economics brings about a re-entry of values through the backdoor of axioms and assumptions. The attempt to create a value-free economics also removes from classroom consideration most of the important economic problems facing us today. This does not mean that objectivity must be sacrificed.

It is possible to make explicit statements concerning educational intents in the affective domain. Surely, many economics instructors hope to change student values concerning free trade, the nature and value of money, the government debt, poverty, labor unions, foreign aid, capitalism vs. socialism, etc. Why pretend that such objectives do not exist or that student attitudes will not be affected by rational inquiry?

A Condensed Version of the Affective Domain of the Taxonomy of Educational Objectives [8]

1.0 RECEIVING (ATTENDING)
  1.1 AWARENESS
  1.2 WILLINGNESS TO RECEIVE
  1.3 CONTROLLED OR SELECTED ATTENTION
2.0 RESPONDING
  2.1 ACQUIESCENCE IN RESPONDING
  2.2 WILLINGNESS TO RESPOND
  2.3 SATISFACTION IN RESPONSE
3.0 VALUING
  3.1 ACCEPTANCE OF A VALUE
  3.2 PREFERENCE FOR A VALUE
  3.3 COMMITMENT
4.0 ORGANIZATION
  4.1 CONCEPTUALIZATION OF A VALUE
  4.2 ORGANIZATION OF A VALUE SYSTEM
5.0 CHARACTERIZATION BY A VALUE OR VALUE COMPLEX
  5.1 GENERALIZED SET
  5.2 CHARACTERIZATION

An example of such an affective educational objective in economics instruction might be worded as follows:

VALUING (3.0)

> Given the following statement, the student will indicate his opinion of the statement and list those reasons which influence his answer: "Increases in the national debt are generally bad." An acceptable performance will consist of disagreeing with the statement and acceptance of the value of full employment through government spending.

Testing for attitudinal changes may be effected by a continuum of possible responses, e.g., strongly agree--to--strongly disagree. Pre-and post-tests may be administered to assess the effectiveness of instruction [14 and 21, p. 246].

Summary

Nearly all of the heretofore stated educational objectives in economics education have been in terms which obviate direct measurement of student achievement of those objectives. From the outset of this study, the staff recognized the necessity of a clear definition of economic literacy and the cruciality of accepted specific objectives in economics education before improvements may be implemented and evaluated.

In attempting this undertaking, it was found that course objectives emanate from many sources, among which are the usefulness of economic knowledge (e.g., citizenship), objectives adapted to student abilities (e.g., non-mathematical content), and objectives serving to achieve other objectives (e.g., student motivation). Because there are many sources of objectives in economics education, and because subjective weightings of objectives vary widely among economists and educators, the Advisory Committee to the study warned of the improbability of devising an accepted statement of specific objectives during this study. After a considerable amount of effort, it was with reluctance that the staff concurred with that judgment.

In this Chapter the staff has attempted to describe the complexities of the task without conveying the impression that functional objectives cannot be written for economics education in the junior colleges. Quite the contrary. The staff concluded this portion of the study convinced that functional objectives could and should be prepared by experts in the field of economics education. This difficult task must be incorporated into any larger study attempting to increase the level of economic literacy among junior college students.

Chapter 9

RECOMMENDATIONS TO IMPROVE ECONOMICS EDUCATION IN CALIFORNIA JUNIOR COLLEGES

A Capsulized Overview of the Purpose, Problem, and Procedure of this Chapter:

(1) The purpose of this section is to specify the components of a comprehensive proposal to improve economics education among the junior colleges in California.

(2) The problem of this section is to identify those categories of variables which may be advantageously altered in order to demonstrate relative influences upon the improvement of economics education.

(3) The procedure of this section was to derive apparent needs from the status study, to review innovative efforts elsewhere, and to extract recommended improvements from meetings with junior college personnel. Tentative recommendations were reviewed and refined by the study Advisory Committee and by two conferences called for this explicit purpose.

Introduction

The suggestions in this section were prepared by the staff as topics for discussion for the Steering/Advisory Committee, a Southern California Conference, and a Northern California Conference. The conferences were held in May, 1967 with delegate-consultants selected from the ranks of instructors and administrators in the junior colleges.

The status study of economics education in the junior colleges (Chapters 2-6) reveals the need for a substantial extension of economics education in these colleges, and an expressed willingness of instructors and administrators to introduce changes.

It is the intention of the California Junior College Association, and an explicit responsibility of the staff of this study to prepare a proposal to seek funds to support the projects recommended in this Chapter.

Goals

Desirable goals of an effort to improve and extend economics education in California junior colleges include:

a. Formulating institutional plans of action which will advance the economic literacy of all junior college students.

b. Identifying ways to increase the enrollment in effective economics courses.

c. Developing economics courses which are meaningful to and appropriate for all junior college students.

d. Recruiting and preparing instructors to teach economics inspirationally.

e. Identifying, preparing, and evaluating effective instructional materials.

f. Developing objectives of economics instruction which will guide efforts toward increasing economic literacy in ways that have lasting impact in improving each individual's fulfillment of citizenship responsibilities and his contribution to the economic improvement of our society.

Key Elements

The categories of key elements which may be manipulated to demonstrate their relative influence in improving economic literacy are the following:

a. Objectives of economics education (general and specific)

b. Students

c. Curriculums and courses

d. Instruction

    1. Instructors (recruitment, selection, preparation)
    2. Instructional tools and materials
    3. Instructional processes (methods and procedures)

e. Administrative support (willingness to experiment and willingness to provide flexibility and support needed for experimentation.)

f. Project coordination, implementation and financial support.

Strategies

Strategies through which significant improvement in economics education may be identified and evaluated include:

a. Preparing a plan (proposal) which describes studies aimed at isolating and evaluating the effect of selected innovations.

b. Securing funds to support the project.

c. Selecting colleges which will undertake evaluative studies.

d. Focusing attention on experimental studies which can demonstrate the superiority of innovations over present practices.

e. Publicizing superior practices and stimulating their widespread adoption.

f. Providing for long-range coordination and extension of cooperative effort among all junior colleges.

Proposals

The proposals outlined below are suggested as means to stimulate a movement toward achieving significant improvement in economics education in the junior colleges.

Changes in instruction of the magnitude which will be necessary to raise the economic literacy of all or even a majority of junior college students will require substantial adaptation of the colleges, their faculties and their students. Rapid progress cannot be expected. Advancement will be speeded if we can identify early the processes and strategies which with reasonable effort and expense will produce the greatest improvement in economic literacy of the greatest number of students. We seek to develop and introduce programs of economics education which will expose all junior college students to at least a minimum of appropriate economics education. Efforts will, therefore, concentrate on the 95 % of the junior college students currently receiving little exposure to economics.

Two guidelines influenced the choice of strategy: (1) Because present information about processes and procedures which will enhance economic literacy are so meager, our major effort must be to experimentally identify practices which will produce significant improvement, and (2) because of the inherent resistance to change in collegiate programs, an equally strong emphasis must be placed on visibly demonstrating research-derived innovations of merit and promise.

The prospect of achieving significant improvement in economic literacy of junior college students is bright. The educational and institutional processes can be implemented to effect needed change. Junior college economics instructors are enthusiastic about engaging in innovative reconstruction. The following projects are suggested as primary foci of our efforts. In the final proposal each project will be developed to include (1) importance (need), (2) the problem, (3) procedure, (4) analysis and evaluation, and (5) application.

Proposal 1. Objectives

a. Need. Objectives which guide current instruction in economics have been developed largely for students who are majoring in economics; they are so general they defy evaluation of achievement by students.

Economists hold divergent views about instructional objectives. It is axiomatic that we cannot evaluate the effectiveness of differing instructional practices until we agree upon the achievements we expect students to attain. Preparation of an acceptable list of objectives stated in measurable behavioral terms must preceed any experimentation with the instructional process.

We must assume: (1) that objectives of economics education which will be generally accepted can be prepared, and (2) scales of performance are essential for appraising achievements in diverse patterns of economics instruction appropriate for the wide range of students who enroll in community colleges.

b. Problem

1. To prepare lists of objectives of economics instruction which are realistically attuned to societal needs and student competencies.
2. To compare the effectiveness of economics instruction which is guided by the other objectives with instruction guided by present objectives.
3. To foster adoption of objectives proved superior by these studies.

c. Procedure

1. Derive objectives from (a) an analysis of societal needs (b) an analysis of student

knowledge and aptitudes (c) and opinions of educators, industrial leaders, labor leaders, and professional societies.

2. Identify colleges which will test the impact of new derived objectives on instruction.

3. Test selected variables such as:

    a. Comparing the achievement of students in a one-semester course using the derived objectives with the achievements of students in a two-semester course using present objectives.

    b. Compare the achievement of students in the three basic types of course, each using present and the derived objectives.

    c. Compare the achievements of selected categories of students instructed under present and the derived objectives.

    d. Compare the duration of student retention instructed under derived and present objectives.

    e. Compare the nature of behavioral change in students taught under present and derived objectives.

4. Establish demonstrations which would: (a) validate initial findings and (b) introduce additional variables which would help define the boundaries of generalization which could be made.

Proposal 2. Students

a. Need. Less than 5 percent of junior college students are currently enrolled in economics courses. Most of these are business and economics majors who later will enroll in other economics courses. Ninety-five per cent of junior college students now receive no economics education.

Among the obstacles which must be overcome before we can increase significantly the economic literacy of the other 95 per cent of junior college students are: (1) student programs are markedly inflexible; adding a 3 unit course in economics will require corresponding reduction in other instruction, (2) requiring students to enroll in economics may produce negative student attitudes which will adversely affect learning, (3) we have limited information about the adaptations necessary to make economics instruction effective with students who have limited previous interest in economics.

b. Problem

1. To identify factors which limit enrollment of students in economics.

2. To test the effectiveness of selected strategies in increasing enrollment in economics.

3. To evaluate the relative effectiveness of selected courses, programs, and instruction on increasing economic literacy of students with limited previous interest in economics.

4. To identify student characteristics which are related to success and failure in various economics courses.

c. Procedure

1. Reorganize selected curriculums so as to permit inclusion of a 3 unit course in economics. Test experimentally for any reduction in achievement in the non-economics components of each curriculum.

2. Evaluate the effectiveness of counselors in increasing enrollment in economics as a result of a program of counselor indoctrination.

3. Compare the achievements in economics of matched groups of students; one electing to enroll in economics, the other required to enroll.

4. Evaluate the impact on economics enrollment in college of a promotional program in high school.

5. Compare the achievements of heterogeneous and homogeneous student groups in each of three different economics courses.

6. Analyze the characteristics of failing and successful students in selected economics courses.

Proposal 3. Curriculum

a. Need. Economics curriculum development has not kept pace with the increase in importance of economics in our rapidly changing technological society. The content and organization of economics instruction which is most effective for students majoring in economics may not be the most appropriate for non-major students. Because students who probably will not engage in advanced study in economics outnumber students who will, by a ratio of 20:1 or more, major attention should be focused on developing appropriate courses for non-economics majors.

b. Problem

1. To determine what items of course content, and what course organization produce the greatest change in student knowledge, attitudes and skills.

2. To compare the effectiveness of course content and organization on student groups differing in abilities, interests, and goals.

3. To compare the relative effectiveness of instruction which is concentrated in specific courses in economics, vs. instruction which

is diffusely allocated to non-economic courses.

c. Procedure

1. Comparison of the degree of student mastery of essential elements of economics in a specially designed one-semester economics course with mastery of students who complete the first semester of the traditional full-year course.
2. Determine the effect on enrollment of a wide array of course offerings vs. the traditional three-course pattern.
3. Measure the relative effectiveness of selected basic topics in economics in achieving defined attitudes, understanding and skills when these topics are modified appropriately for three types of economics courses.
4. Determine the decay rate of economic information derived from principles courses vs. applied courses for selected groups of students.

Proposal 4. Instruction: Instructors

a. Need. Among all the projects we propose, attention to instructional improvement will probably produce greatest returns because instructors are the most critical element in student learning. To provide instruction in economics to all junior college students will require at least a ten-fold increase in the staff. Present patterns of teacher preparation may be inappropriate for teachers who teach the full range of junior college students. Continuing changes in economics theory and practice will mandate provision for in-service up-grading opportunities for all staff.

b. Problem

1. To create and establish programs of teacher

recruitment, preparation, and up-grading which would insure an adequate supply of qualified teachers and provide opportunity for their periodic retraining.

c. Procedure

1. Develop a plan of teacher preparation composed of (a) repeating summer institutes providing for pre-employment preparation and post-employment retraining and (b) internships in selected junior colleges.
2. Evaluate the effectiveness of the major elements of this program.

Proposal 5. Instruction: Instructional Materials, Methods, and Procedures

a. Need. The improbability of increasing enrollment ten or twenty-fold without increasing the use of television, programmed learning, computer assisted instruction, and other manpower reducing devices is obvious. New instructional materials must be produced in any case to keep abreast of economic change and to be effective for the full range of students.

b. Problem

1. To identify through experimental evaluation existing instructional materials which are most effective.
2. To produce new instructional materials which hold promise of being more effective than existing materials.
3. To evaluate experimentally existing and new instructional processes including but not limited to programmed learning, television, and computer assisted instruction which have promise of conserving effort and increasing effectiveness.

4. To identify processes which increase the application of economic principles in real life situations.

c. Procedure

1. Identify authors and encourage and guide textbook publishers in preparing effective printed material.

2. Experimentally test the effect on learning (immediate and long-range) of students participating in simulated and real economic situations.

3. Identify learning which can be economically enhanced by the use of television, programmed learning, computer assisted instruction, and other manpower saving procedures.

Proposal 6. Evaluation Instruments

a. Need. Research can be no better than the measurement instruments it employs. Currently there are few instruments by which economics education can be evaluated. There, likewise, are limited performance norms.

b. Problem

1. To develop evaluative instruments which will measure accurately student attainment of behavioral objectives.

2. To develop norms appropriate for comparing achievements of students covering a wide band of performance.

3. To develop instruments which identify accurately components of curriculum and instruction which produce desirable and lasting knowledges, attitudes, and skills.

c. Procedure

1. Derive new test questions from the explicitly

stated objectives constructed (Proposal 1).

2. Validate and refine testing instruments so that standardized tests with normative data may be published which will be appropriate to the objectives of specific kinds of economics courses.

3. Utilize the Test of Economic Understanding, and the College-Level Test of Economic Understanding as exogenous evidence of concurrent validity.

Proposal 7. Administrative Support

Substantial obstacles must be overcome before colleges universally adopt such a major change as enrolling all students in a three-unit course in general economics. Alternate ways of achieving satisfactory increases in economic literacy should be explored. But each alternate presents other serious obstacles. For example, little may be gained by attempts to include fragments of economics education in many courses, because the difficulties of curriculum revision and staff preparation both exceed those needed to introduce a separate economics course. These and other administrative factors need to be critically evaluated.

The administration of the college is in a pivotal position to enhance or reduce the development and the effect of promising innovations. This proposal does not contemplate a major study of the impact of various administrative stances with respect to adoption of innovations, however, it is a variable which will need to be assessed or controlled as the project moves forward. The central question is what administrative action fosters improvement of economics instruction?

Proposal 8. Coordination and Implementation

If the full impact of these studies are to be realized, and if the full power of cooperative action of the 80 California junior colleges are to be harnessed in this project, and more importantly if such studies are to have major impact on a national scale, some provision for leadership and coordination must be made.

It is proposed that:

1. An Institute for the Advancement of Economics Education in Junior Colleges be organized and funded on a continuing basis. The institute would have the following characteristics and responsibilities:

    a. Its operation would be directed by a committee representative of junior colleges, colleges, universities, business, industry and labor.

    b. Its activities would be coordinated by a director.

    c. Among its major responsibilities would be:

        1. Developing and operating a continuing program of preparation and up-grading for junior college economics instructors comprised of (a) summer institutes, (b) internship experiences in selected junior colleges, and (c) periodic conferences both local and regional.

        2. Coordinating the studies recommended in this proposal.

        3. Initiating other promising studies.

        4. Serving as a laboratory for the development of improved instructional materials.

        5. Developing improved evaluative instruments.

        6. Consulting with and guiding participating colleges in their research.

        7. Organizing, sponsoring, and coordinating developmental programs which would encourage the early adoption of worthy research-derived innovation.

Reactions of Conference Delegates

Nearly thirty delegates from the junior colleges in California reviewed the tentative proposals to improve economics education. The delegates invited to the Northern and Southern California Conferences were from the ranks of junior college personnel concerned with economics education. Among the delegates were included deans of instruction, social science division chairmen, business division chairmen, and instructors in economics.

The delegates were eager to undertake the types of experimental studies outlined in the tentative proposals. The main focus of discussion at the conferences centered on how the proposal would be funded and implemented.

It was suggested that the final versions of the proposals designed to secure funding should be submitted to the American Economic Association's Committee on Economic Education, and the Joint Council on Economic Education for professional endorsement. Several funding sources were discussed along with strategies whereby the proposals might be brought to fruition.

It was the unanimous opinion of the delegates that significant changes in economics education could effectively benefit the extension of economic literacy among the great majority of lower division students enrolled in California junior colleges. Most of the delegates also expressed a willingness to participate in the project should it be funded.

The Need For A Comprehensive Proposal

Given the independent nature of junior colleges, and the individualistic nature of teaching economists, it will be essential to obtain both institutional and faculty commitment to the type of educational research envisioned in the preceding proposals. Experimentation in economics education necessitates the systematic control, coordination, and evaluation which is sometimes deemed repugnant among educators. And so, participants selected to conduct such research must voluntarily relinquish a certain amount of autonomy in their economics courses in order to ascertain whether controlled manipulation of certain variables brings significant pedagogical results. Incentives are essential if such coordinated program is to function effectively.

The dividends from such experimentation in economics education will certainly be a major motivating factor among teaching economists. The demonstrated effectiveness of teacher training, of mutually complementary instructional materials, of clear course objectives, and of newly constructed courses appropriate to junior college students and curricula, will all be given detailed study. The findings will be published in fully documented technical reports so that instructors in economics may effectively redesign their offerings for the junior college environment. The payoff is ultimately in terms of the economic literacy of junior college students. The more immediate results will consist of hard conclusions derived from well-designed experiments in economics education. These accumulated results will no doubt indicate proven combinations of techniques and materials which then may be distributed or marketed to those vitally concerned with economics education.

It is extremely unlikely that the present chaotic approaches to the problems outlined in the preceding proposals will ever result in the payoffs sought. The overriding need for systematic, well-controlled experiments in economics education is a welcomed imperative. Now is a most propitious time to carefully state objectives, devise controlled experiments, and evaluate the results so that a range of proven possibilities in economics education may be constructed to revitalize elementary economics in the junior colleges. The need for a comprehensive proposal and for its coordinated implementation is apparent.

SUMMARY OF PART II, RECOMMENDED IMPROVEMENTS

The three preceding sections of this report have attempted to delineate the ways and means by which economics education in California junior colleges might be improved.

The National Task Force has been a major factor in initiating improved economics education and specifying general objectives, particularly at the primary and secondary school levels. The renewed interest of professional organizations (such as the American Economic Association) in economics education, and the increased experimentation in collegiate economics, attests to the current widely felt dissatisfaction with introductory economics courses at the college level. Experimentation in economics education at the junior colleges is also occurring, but in isolation and with little dissemination of findings. In almost all experiments conducted at the college level, there is a notable lack of careful research design. Results thus generated will be of minimal usefulness to the junior college instructor.

There remains a considerable void in the area of specific behavioral objectives which specify the educational intents of courses appropriate for junior college students. Until objectives are specified, there can be little scientific experimentation in economics education.

Proposals to improve economics education are based upon the needs and problems outlined in the status study of economics education in California junior colleges, and upon evidences of previous efforts to improve economics education elsewhere have been prepared. The proposals are stated as separate items for expositional purposes. Any one proposal cannot meaningfully achieve the objectives sought without attention to the other variables involved in a junior college setting. The proposals are thus mutually interdependent.

Finally, it is the firm belief of the authors that the resources expended on this study will be of value to the extent that the proposals are implemented in a coordinated way in order to improve economics education in the junior colleges. If this report remains a memorandum unacted upon, then our findings and recommendations have been for naught, and a golden opportunity will be foregone.

A Final Appeal

Adam Smith, John Stuart Mill, and Alfred Marshall were distinguished not only for their contributions to economic theory, but also because they were among the greatest educators of their generation and succeeding generations. Analogous contemporary examples might also be given. The professionalization and academic specialization characteristic of Twentieth Century economists has brought many gains--but not without some costs. The need to reintegrate education and economics has never been more widely espoused than during the present time. It is precisely because economics is a difficult subject to teach effectively that teaching economics becomes a process warranting the scrutiny of educators and economists alike. The junior colleges provide an ideal staging locale for this alliance to systematically assault economic illiteracy. The active support of educators and professional economists is essential if this undertaking is to succeed.

APPENDIX A

Full Citations of Economics Textbooks Listed in Tables 4, 6, 8, and 11.

McConnell, Campbell R. *Economics: Principles, Problems, and Policies*, 3rd ed., McGraw-Hill, 1966.

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APPENDIX B

Test of Economic Understanding Raw Score to Scaled Score Conversions*

Raw Score	Scaled Score Form A	Scaled Score Form B	Raw Score	Scaled Score Form A	Scaled Score Form B
50	32	32	27	18	19
49	32	32	26	17	19
48	31	31	25	17	18
47	30	31	24	16	17
46	30	30	23	16	16
45	29	30	22	15	16
44	28	29	21	15	15
43	27	28	20	14	14
42	27	28	19	13	13
41	26	27	18	12	13
40	26	27	17	12	12
39	25	26	16	11	11
38	25	25	15	11	10
37	24	25	14	10	10
36	24	24	13	9	9
35	23	24	12	9	8
34	22	23	11	8	7
33	22	22	10	7	7
32	21	22	9	7	6
31	20	21	8	6	5
30	20	21	7	5	5
29	19	20	6	5	4
28	19	20	5	4	3

*Source: Science Research Associates, Interpretive Manual and Discussion Guide, Test of Economic Understanding.

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